2019 Community Health Needs Assessment/Community Health Assessment of Nevada County

Conducted on behalf of

Sierra Nevada Memorial Hospital
155 Glasson Way
Grass Valley, CA 95945

Nevada County Public Health Department
500 Crown Point Circle
Grass Valley, CA 95945

Conducted by

COMMUNITY HEALTH INSIGHTS

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Executive Summary

Purpose

The purpose of this joint community health needs assessment (CHNA)/community health assessment (CHA) was to identify and prioritize significant health needs of the Nevada County community. The priorities identified in this report help to guide health improvement efforts of both Sierra Nevada Memorial Hospital and Nevada County Department of Public Health.

This CHNA report meets requirements of the Patient Protection and Affordable Care Act (and, in California, Senate Bill 697) that not-for-profit hospitals conduct a CHNA at least once every three years, as well as the Public Health Accreditation Board (PHAB) CHA requirements. The CHNA/CHA was conducted by Community Health Insights (www.communityhealthinsights.com).

Community Definition

Nevada County was chosen as the geographical area for the CHNA/CHA because it contains the primary service area of Sierra Nevada Memorial Hospital, and is the statutory service area of the Nevada County Department of Public Health.

Assessment Process and Methods

The data used to conduct the CHNA were identified and organized using the widely recognized Robert Wood Johnson Foundation's County Health Rankings model.[1] This model of population health includes many factors that impact and account for individual health and well-being. Further, to guide the overall process of conducting the assessment, a defined set of data-collection and analytic stages were developed. These included the collection and analysis of both primary and secondary data. Primary data included interviews with 32 community health experts, social-service providers, and medical personnel in one-on-one and group interviews, as well as one town hall meeting. Further, 24 community residents participated in five focus groups across the county, and 412 residents completed the community health assessment survey.

Using a social determinants focus to identify and organize secondary data, datasets included measures to described mortality and morbidity and social and economic factors such as income, educational attainment, and employment. Further, measures also included indicators to describe health behaviors, clinical care (both quality and access), and data to describe the physical environment.

Process and Criteria to ID and prioritize SHNs

Primary and secondary data were analyzed to identify and prioritize significant health needs. This began by identifying 10 potential health needs (PHNs). These PHNs were those identified in the previously conducted health assessments with area hospitals. Data were analyzed to discover which, if any, of the PHNs were present in the area. After these were identified, the health needs were prioritized based on an analysis of primary data sources that identified the PHN as a significant health need (SHN).

List of Prioritized SHNs

The following SHNs were identified and are listed below in prioritized order:
1. Access to basic needs such as housing, jobs and food
2. Access to quality primary care health services
3. Access to mental/behavioral/substance abuse services
4. Injury and disease prevention and management

5. Access to specialty and extended care
6. Active living and health eating
7. Access and functional needs
8. Access to dental care and preventive services
9. Pollution-free living environment
10. Safe and violence-free environment

Resources Potentially Available to meet the Significant Health Needs
In all, 110 resources were identified that were potentially available to meet the identified SHNs in the Nevada County area. The identification method included starting with the list of resources from previous area health assessments, verifying that the resource still existed, and then adding newly identified resources identified as part of the 2019 assessment.

Conclusion
This CHNA/CHA report details the needs of the Nevada County community as a part of a collaborative partnership between Sierra Nevada Memorial Hospital and Nevada County Department of Public Health. It provides both an overall health and social examination of Nevada County and a deeper examination of the needs of community members living within areas of the county experiencing disproportionately unmet health needs. The work provides a comprehensive profile to guide decision-making for implementation of community-health-improvement efforts.

Introduction and Purpose

The health of a community is greatly influenced by the environmental and structural components of the community, and personal characteristics of its members. Community health includes the health status of the people, and the conditions in the community that promote, protect and preserve their health. A thriving health community is one in which members have economic opportunities, are engaged in their community, have good personal mind body wellness, strong social connections, and are deeply connected to the health of the natural environment in which they live.[1]

Sierra Nevada Memorial Hospital (SNMH) and Nevada County Department of Public Health (NCDPH) both work to assure that residents of Nevada County live healthy lives. In doing so both engage in conducting community health assessments to direct community health improvement efforts as part of a strategic community health improvement focus. In 2018, SNMH and NCDPH worked to conduct a collaborative community health assessment, and in 2019 will combine efforts for investment in community improvements. The community health assessment aims to: 1) Identify and prioritize the health needs of the

Figure 1: What are the biggest health needs in the community? Word cloud of the results from the 2019 assessment interviews

community 2) provide social and health data at both the Nevada County level, as well as sub-county level for directed community health examination; 3) provide resources available in the community to address the needs of the community; and 4) inform community health improvement efforts.

Hospital and Local Public Health Department Partnership

California state and federal law require that nonprofit hospitals conduct a community health needs assessment (CHNA) every three years. Nationally, state, local and tribal health departments are pursuing "public health accreditation" from the national Public Health Accreditation Board (PHAB), and a community health assessment (CHA) is a crucial component of this.

The definition of a community health need is similar for the CHNA and the CHA. Federal regulations define a *health need* accordingly for CHNAs: "Health needs include requisites for the improvement or maintenance of health status in both the community at large and in particular parts of the community (such as particular neighborhoods or populations experiencing health disparities)" (p. 78963).[2] Meanwhile, PHAB refers to health needs as "those demands required by a population or community to improve their health status" (p. 18).[3] Both CHNAs and CHAs guide the development of community health improvement efforts aimed at addressing the identified needs. Hospital CHNAs refer to these as

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[1] Culturalseed. (2019). Framework for thriving Global Communities: The Five Indicators of Thriving Communities.
[2] *Federal Register*, Vol. 79, No. 250, (Wednesday, December 31, 2014). Department of the Treasury, Internal Revenue Service.
[3] Public Health Accreditation Board (2011, September). Acronyms and Glossary of Terms, Version 1.0.

implementation plans, while public health agencies call them community health improvement plans or CHIPs. Given the similarities between the CHNA and CHA processes, national experts are calling for nonprofit hospitals and public health departments to work together on local health assessments and community health improvement efforts.[4]

This report documents the processes, methods, and findings of a collaborative CHNA/CHA conducted on behalf of a partnership between Sierra Nevada Memorial Hospital (SNMH) and Nevada County Public Health Department (NCPHD) covering the geographical area of the county. The collaboration between the hospital and the county emphasized a team approach to addressing the key components of the CHNA/CHA. Each partner was committed to the process, engaged in regular meetings, provided timely feedback for analysis, and willingly shared expertise to support the successful completion of the report. The CHNA/CHA was conducted over a period of eight months, beginning in February 2018 and concluding in October 2018. This CHNA/CHA report meets the requirements of the Patient Protection and Affordable Care Act (and in California of Senate Bill 697). In addition, this report meets the requirements set out by PHAB for the conducting of a CHA as a part of a local health department.

Organization of This Report

This report follows federal guidelines issued on how to document a CHNA/CHA. First, it describes the prioritized listing of significant health needs identified through the assessment, along with offering a description of the process and criteria used in identifying and prioritizing these needs. Next, it details the methods used to conduct the CHNA/CHA, including how data were collected and analyzed. Then, it details the community served by partners and how the community was identified. Next, it provides a description of how partner organizations solicited and considered the input received from persons who represented the broad interests of the community served. Next it identifies and describes resources potentially available to meet these needs.

A detailed methodology section titled "Nevada County Area 2018 CHNA/CHA Technical Section" is included later in this report (see pp. 37-116) for an in-depth description of the methods used for collection and analysis of data and compiling the results to identify and prioritize significant health needs.

Findings

Prioritized, Significant Health Needs

The analysis of data included both primary and secondary to identify and prioritize the significant health needs within the Nevada County area. In all, 10 significant health needs were identified. After these were identified they were prioritized based on an analysis of primary data sources (key informant interviews and focus groups) that mentioned the health need as a priority health need. The findings are listed below and displayed in Figure 2.

1. Access to basic needs such as housing, jobs and food
2. Access to quality primary care health services
3. Access to mental/behavioral/substance abuse services

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[4] Burnett, K. (2012, February). Best Practices for Community Health Needs Assessment and Implementation Strategy Development: A Review of Scientific Methods, Current Practices and Future Potential. Public Health Institute on behalf of Center for Disease Control and Prevention.

4. Injury and disease prevention and management
5. Access to specialty and extended care
6. Active living and health eating
7. Access and functional needs
8. Access to dental care and preventive services
9. Pollution-free living environment
10. Safe and violence-free environment

In the figure, the dark blue portion of the bar represents the percentage of primary data sources that referenced the health need, while the green portion shows the percentage of times any theme associated with a health need was mentioned as one of the top three health needs in the community. Values for these measures for each of the health needs are shown in Table 1.

Nevada County 2019 Prioritized Health Needs

Health Need	Percent of Sources Identifying Health Need	Percent of Times Health Need Identified as a Top 3 Priority
Access to Basic Needs Such as Housing, Jobs, and Food	100%	34%
Access to Quality Primary Care Health Services	100%	21%
Access to Mental/ Behavioral/ Substance Abuse Services	100%	21%
Injury and Disease Prevention and Management	92%	11%
Access to Specialty and Extended Care	69%	5%
Active Living and Healthy Eating	69%	3%
Access and Functional Needs	62%	3%
Access to Dental Care and Preventive Services	54%	
Pollution-Free Living Environment	23%	
Safe and Violence-Free Environment	15%	3%

■ Percent of Sources Identifying Health Need

■ Percent of Times Health Need Identified as a Top 3 Priority

Figure 2: Prioritized, significant health needs for Nevada County

Table 1: Community Member Measures Used for Health Need Prioritization

Health Need	Percentage of Key Informants and Focus Groups Identifying Health Need	Percentage of Times Key Informants and Focus Groups Identified Health Need as a Top Three Priority
Access to Basic Needs such as Housing, Jobs, and Food	100%	34%
Access to Quality Primary Care Health Services	100%	21%
Access to Mental/ Behavioral/ Substance Abuse Services	100%	21%
Injury and Disease Prevention and Management	92%	11%
Access to Specialty and Extended Care	69%	5%
Active Living and Healthy Eating	69%	3%
Access and Functional Needs	62%	3%
Access to Dental Care and Preventive Services	54%	0%
Pollution-Free Living Environment	23%	0%
Safe and Violence-Free Environment	15%	3%

The significant health needs are described below. Those secondary data indicators used in the CHNA/CHA that performed poorly compared to a benchmark are listed in the table below each of the significant health needs. Qualitative themes that emerged during analysis are also provided in the table. Survey results that help to further describe the health need for Nevada County are also displayed, but were not used in health need determination.

1. *Access to Basic Needs, Such as Housing, Jobs and Food*

Access to affordable and clean housing, stable employment, quality education, and adequate food for good health are vital for survival. Maslow's Hierarchy of Needs[5] says that only when people have their basic physiological and safety needs met can they become engaged members of society and self-actualize or live to their fullest potential, including enjoying good health.

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[5] McLeod, S. (2014). *Maslow's Hierarchy of Needs*. Retrieved from:
http://www.simplypsychology.org/maslow.html

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
- Years of Potential Life Lost - HPSA Medically Underserved Area - High School Graduation - Median Household Income - Limited Access to Healthy Food - Immunization Rates 7th Grade - Immunization Rates Kindergarten	- Access to affordable housing – costs for housing are high - Housing that is suitable for healthy, safe living. Many residents living in unpermitted structures especially in more rural areas of the county - Limited housing for seniors; low-income, working families; and homeless residents - Homelessness a significant issue – living in isolation, near the river, few shelters in the area - Poverty and isolation throughout the county – hard to indicate the location of people who struggle more - Lack of jobs in the area – lack of economic opportunities for young people - Food insecurity – food access issues more prevalent in rural outlying areas - Food insecurity for the aging population due to limited physical access to food, lack of transportation to access healthy foods, and economic insecurity - Limited access to healthy foods in many areas throughout the county - Remote rural area still lack water for some county residents - Lack of access to technology – limited cell and internet	- Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? - Do you act as a caregiver for another ADULT, such as spouse, sibling, aunt, uncle, parent or grandparent? - Housing ranked as a top three biggest health need in the community

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
	service inhibiting access to resources and information - Lack of law enforcement presence in outlying rural area - Cost of living high in Truckee and resort areas - Seasonal work affects employment opportunities in and around the Truckee area - Many focusing on basic needs – sleep (shelter) and food access before health - Access to affordable healthy food in Truckee is limited	

Interview participants expressed a deep need for affordable housing in Nevada County. Data from interviews in the CHNA/CHA showed area residents are clearly concerned with safe and affordable housing for all area residents, especially low-income residents and seniors. Housing that is "adequate, safe and affordable" was also ranked as the top biggest health problem for the community in the survey results. This was coupled with survey participants also indicating that housing is the most important factor for a quality of life in a "healthy community."

For this health need the rate of Years of Potential Life Lost was elevated for Nevada County at 5,913.61 per 100,000 in comparison to the California state rate of 5,217.32 per 100,000. Also, 45.7% of Nevada County survey participants (compared to 35.0% for the state) indicated that during the past 30 days their health was not good for at least one or more days. A portion of Nevada County is also classified as a Health Professional Shortage Area (HPSA) – Medically Underserved Area. Medical Underserved Areas are federally designed areas that are defined as having "too few primary care providers, high infant mortality, high poverty or a high elderly population. [6]"

Examination of other basic needs showed lower median income ($60,501 vs the state at $67.715), lower high school graduation rates (46.93% versus the state at 82.77%)[7] and limited access to health food for area families in the county (6.77% versus the state at 3.29%). Survey participants also ranked poverty as the fifth biggest health problem in the community which was also confirmed in interviews with participants indicating that a lack of economic opportunities, the presence of poverty and homelessness are issues for area residents.

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[6] Health Resource Services Administration (HRSA). (2019). MUA Find. Retrieved from: https://data.hrsa.gov/tools/shortage-area/mua-find
[7] NOTE: this data should be interpreted with caution as Nevada County has a large charter school contract with schools outside of the county area that are contributing to these findings

Examination of immunization rates for the county showed lower immunization rates in kindergarten and 7th grade. The percent of population obtaining immunizations for kindergarten was 81.70% for Nevada County compared to 95.10% for the state, and 90.50% for immunization for 7th grade in Nevada County compared to 98.4% for the state. However, survey results indicated that rates for participants getting a flu shot within the last 12 months were higher in Nevada County compared to the state (57.60% and 61.20% in the Tahoe Forest Survey compared to the California percent at 42.0%).

2. *Access to Quality Primary Care Health Services*

Primary care resources include community clinics, pediatricians, family practice physicians, internists, nurse practitioners, pharmacists, telephone advice nurses, and similar. Primary care services are typically the first point of contact when an individual seeks healthcare. These services are the front line in the prevention and treatment of common diseases and injuries in a community.

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
- Cancer Mortality - CLD Mortality - Heart Disease Mortality - Hypertension Mortality - Influenza Pneumonia Mortality - Kidney Disease Mortality - Liver Disease Mortality - Stroke Mortality - Cancer Female Breast - Diabetes Prevalence - Cancer Prostate - HPSA Primary Care - HPSA Medically Underserved Area - Female Breast Cancer Mortality - Invasive Cancer Incidence - Prostate Cancer Mortality - Immunization Rates 7th Grade - Immunization Rates Kindergarten - Prenatal Care	- Need for increased access to timely and quality care - Participants reporting long wait times for primary care access in the county at community clinics and private providers - Primary care in geographic silos in the county - Need for practitioners to engage in trauma informed care - Lack of services in outlying rural areas - Distance required to travel for care in the county a barrier due to lack of adequate public transportation systems – especially for the aging population - Local hospital lacking in advanced care practitioners – must leave the county for advanced care - Insurance barriers around coverage and availability of providers in the county – many providers in the area not taking new patients - Need for patient navigation – community lacking in a	- Would you say that in general your health is: - Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? - A flu shot is an influenza vaccine injected into your arm. During the past 12 months, have you had a seasonal flu shot? - Have you ever had sigmoidoscopy and colonoscopy exams? - Have you EVER been told by a doctor, nurse or other health professional you had cancer? - Has a doctor or other healthcare provider EVER told you that you have: A depressive disorder (including depression, major depression, dysthymia, or minor depression) - Access to health care as a top three biggest health need in the community

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
	medical home due to timeliness of care - Self-employed county residents have access to care issues due to lack of stable insurance - Need for more pain management providers - Lack of advanced care providers in the area for referrals from primary care - Stigma of homelessness with primary care provider's affecting quality of treatment and care - Needing increased access to primary care that extends beyond traditional hours - Increase community trust of the healthcare system - Community beliefs about cost of care resulting in delay of care and misdiagnosis for many community members; community members report waiting to obtain care due to cost, resulting in the complex diagnoses	

Data informing the determination of this health need included survey questions on overall health, interview findings on access to primary care for prevention and treatment of health issues, and various rates of chronic disease indicating higher rates for Nevada County in comparison to the state. Survey data revealed that 51.1% of Nevada County participants rated their general health as either "excellent" or "very good" compared to the state percent of 53.0%.

Secondary data revealed that portions of Nevada County were found to be both a HPSA for Primary Care and a HPSA Medically Underserved Area. Survey participants also indicated that access to healthcare was the third biggest health problem in Nevada County and interview participants expressed a deep need for increased access in the county, citing long wait times, difficulty with insurance coverage, a need for patient navigation services to name a few.

Many rates of chronic disease indicators were higher for Nevada County compared to the state. These rates included the following:
- Heart Disease Mortality - 224.08 deaths per 100,000 in Nevada County versus 157.33 per 100,000 for California

- Hypertension Mortality – 13.04 deaths per 100,000 in Nevada County versus 12.57 per 100,000 for California
- Stroke Mortality - 52.43 deaths per 100,000 in Nevada County versus 37.51 per 100,000 for California
- Chronic Lung Disease (CLD) Mortality – 69.26 deaths per 100,000 in Nevada County versus 34.92 per 100,000 for California
- Diabetes Prevalence – 8.70% of age 20 and older with diagnosed diabetes in Nevada County versus 8.50% for California

Examination of cancer in Nevada County showed that 18% survey participants reported cancer diagnosis compared to 15.9% of state respondents. Additionally, secondary data showed higher rates of all-cause cancer, female breast and prostate cancer in the county.
- All – Cause Cancer Mortality – 230.25 deaths per 100,000 in Nevada County versus 153.44 per 100,000 for California
- Female Breast Cancer Mortality – 25.80 deaths per 100,000 in Nevada County versus 19.10 per 100,000 for California
- Cancer Incidence Female Breast – 131.27 new cases of breast cancer per 100,000 versus 120.57 new cases per 100,000 for California
- Prostate Cancer Mortality – 20.00 deaths per 100,000 in Nevada County compared to 19.60 per 100,000 for California

3. *Access to Mental, Behavioral, and Substance Abuse Services*

Individual health and well-being are inseparable from individual mental and emotional outlook. Coping with daily life stressors is challenging for many people, especially when other social, familial, and economic challenges also occur. Adequate access to mental, behavioral, and substance abuse services helps community members obtain additional support when needed.

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
- Liver Disease Mortality - Suicide Mortality - Poor Mental Health Days - Drug Overdose Deaths - Excessive Drinking - HPSA Mental Health - Psychiatry Providers - Nonfatal Poisoning - Opioid Overdose - Deaths - Substance Use Hospitalizations - ED Utilization Substance Use - Unintentional Poisonings - ED Visit Opioid Overdose - E Product Use	- County lacking adult and adolescent inpatient care for substance abuse - Need for behavioral care across the spectrum of mental illness – especially for severe mental illness diagnosis - Need for youth psychiatrists - A few participants reporting high rates of suicide in the county (though not supported by secondary data) - Substance abuse major issue in the county	- Would you say that in general your health is: - Do you now smoke cigarettes every day, some days or not at all? - Do you currently use chewing tobacco, snuff, or snus every day, some days or not at all? - Has a doctor or other healthcare provider EVER told you that you have: A depressive disorder (including depression, major depression, dysthymia, or minor depression)

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
	o Alcohol, heroin, meth, opioids and marijuana usage o Marijuana availability and usage normalized in the county, multiple generational usage; high usage in pregnant mothers; brings transient workers to the area for seasonal work. - Many coming to area to live off the grid – isolation increases anxiety and depression - Little to do for youth in the county – need to focus on prevention of childhood traumatic experiences and increasing youth resiliency - High schools in the area lack comprehensive drug education - Outlying rural areas lack law enforcement presence – which increases substance abuse usage and reduces enforcement - High degree of alcoholism (adult binge drinking), smoking and drug addiction - Hard to recruit/retain providers and facilities due to low population numbers in county hubs (Truckee, Grass Valley, Nevada City) - Need increased care for mental illness and substance abuse treatment for Spanish-speaking communities in Truckee - Increased stress for undocumented families – fear of deportation	- Mental health problems ranked as a top three biggest health need in the community

Participants expressed that many Nevada County residents struggle with mental health issues and lack access to providers for treatment. Survey results for Nevada County showed that 26.80% of respondents have had a depressive disorder compared to 19.2% of state respondents. Mental health problems were also ranked as the second highest biggest health need in the community by survey participants. Secondary data revealed that the suicide mortality rate for Nevada County was 20.22 deaths per 100,000 compared to the state rate at 10.78 per 100,000.

Assessment participants indicated that there is a great need for more mental health providers in the county for treatment and prevention of mental illness across the spectrum of severity. This was enforced by secondary data showing that Nevada County is considered a federally determined HPSA for Mental Health and Psychiatry Providers. The rate of psychiatry providers per 100,000 population was 9.13 in the county compared to 13.42 for the state.

Substance use and abuse was also indicated by interview and survey respondents as a health issue in the county. Substance use emergency department visits for Nevada County greatly exceeded the state rate at 662.30 ED visits per 100,000 compared to the state rate of 453.00 visits per 100,000. Interview participants spoke about the prevalence of opioid usage, alcoholism, and smoking and marijuana usage in the county. Moreover, secondary data showed that age-adjusted drug overdose deaths in Nevada County were 21.90 per 100,000 compared to the state rate of 12.20 deaths per 100,000. Specific to opioid usage, opioid overdose deaths for Nevada County were 5.47 deaths per 100,000 compared to the state at 4.49 deaths per 100,000, and emergency department visits due to opioid overdose was at 22.03 ED visits per 100,000 versus the state at 10.31 per 100,000.

Interview participants also discussed high alcohol consumption for many residents in the county, though survey results for excessive drinking fell just below the state rate. Secondary data showed that the percentage of adults reporting binge or heavy drinking was 19.09% for Nevada County compared to the state percent of 17.81%. Liver Disease mortality was also slightly higher in the county compared to the state (14.36 deaths per 100,000 versus 13.18 deaths per 100,000).

Marijuana usage in the county, including the growing of marijuana, was discussed extensively by our interview participants. Though no comparative state benchmark exists, more than 60% of survey participants indicated that they have used marijuana of hashish in their lifetime. Additionally, survey data on how frequently marijuana or hashish is smoked showed that more Nevada County and Tahoe Forest survey respondents report smoking 16-20 days; 21-25 days; and 26 or more days a month in comparison to state survey respondents.

Other data on tobacco usage showed higher rates in Nevada County compared to the state for cigarette smoking and e-product usage. Survey results for Nevada County showed that 7.10% of respondents' report smoking cigarettes every day compared to 6.0% of state respondents, and secondary data showed that 11.80% of Nevada County are current smokers compared to 10.97% for the state. Moreover, secondary data also revealed that 72.0% of Nevada County tobacco retailers sell electronic smoking devices.

4. *Injury and Disease Prevention and Management*

Knowledge is important for individual health and well-being, and efforts aimed at prevention are powerful vehicles to improve community health. When community residents lack adequate information

on how to prevent, manage, and control their health conditions, those conditions tend to worsen. Prevention efforts focused on reducing cases of injury and around infectious disease control (e.g., STI prevention, influenza shots) and intensive strategies around the management of chronic diseases (e.g., diabetes, hypertension, obesity, and heart disease) are important for community health improvement.

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
- Alzheimer's Mortality - CLD Mortality - Heart Disease Mortality - Hypertension Mortality - Influenza Pneumonia Mortality - Kidney Disease Mortality - Liver Disease Mortality - Stroke Mortality - Suicide Mortality - Unintentional Injury Mortality - Diabetes Prevalence - Drug Overdose Deaths - Excessive Drinking - Adult Smokers - Motor Vehicle Crash Deaths - E Products Use - Immunization Rates 7th Grade - Immunization Rates Kindergarten - Prediabetes	- Few opportunities for youth to engage in healthy recreational activities in the county - Community resources not keeping up with pace of rapid county population growth - Access to preventive services is lacking - Low immunizations rates – many charter schools in the county - Insufficient access to activities for seniors to engage and connect - Need more educational resources for adults and children around basic prevention of chronic disease needed - More resources for chronic disease management and substance abuse – especially hypertension, diabetes, hepatitis C, and dementia - Need increased understanding for the community on how they can connect with resources in the county - Need increased knowledge around navigation of the healthcare system including insurance coverage and how to access various types of care - Need opportunities to learn how to cook healthy meals – many health providers lack	- Would you say that in general your health is: - Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? - Do you have asthma? - Do you now smoke cigarettes every day, some days or not at all? - Do you currently use chewing tobacco, snuff, or snus every day, some days or not at all? - During the past 30 days, how many DAYS per WEEK did you have at least one drink of any alcoholic beverages? - During the past 30 days, how many DAYS per MONTH did you have at least one drink of any alcoholic beverages? - During the past 30 days, on how many days did you use marijuana or hashish? - A flu shot is an influenza vaccine injected into your arm. During the past 12 months, have you had a seasonal flu shot? - Have you ever had sigmoidoscopy and colonoscopy exams? - Have you EVER been told by a doctor, nurse or other

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
	basic knowledge to disseminate to patients - Need more services/education around the prevention and management of chronic pain - Fatal traffic accidents – many drive very fast on county roads resulting in death - Lacking access to reproductive health services and screening in the Truckee area - Need for greater prevention of workplace injuries - Need for senior services in eastern portion of the county including meal delivery, disease screening, and depression screening	health professional you had cancer? - Has a doctor or other healthcare provider EVER told you that you have: A depressive disorder (including depression, major depression, dysthymia, or minor depression) - Do you act as a caregiver for another ADULT, such as spouse, sibling, aunt, uncle, parent or grandparent? - Access to health care as a top three biggest health need in the community

Focusing on injury and disease prevention, secondary data revealed high rates of chronic illnesses previously mentioned including heart disease hypertension, stroke, chronic lung disease morality; and diabetes and prediabetes prevalence. Additionally, the mortality rate due to Alzheimer's Disease was also elevated in Nevada County at 60.54 deaths per 100,000 compared to the state at 35.03 deaths per 100,000. Interview participants discussed the need for more services for the aging population including prevention of illnesses related to dementia. Coupled with these findings, survey results indicated that 18.90% of respondents serve as caregivers for another adult in their lives, compared to 14.2% of state respondents.

As previously mentioned, secondary data showed immunization rates for kindergarten and 7th grade were lower in the county than the state. Interview participants indicated that many area families do not fully vaccinate their children due to a large number of charter schools in the area, contributing to risk for outbreaks of infectious illnesses. Secondary data showed the deaths due to influenza and pneumonia were higher in the county at 21.48 deaths per 100,000 compared to the state rate of 15.96 per 100,000.

Examination of mental health and substance use showed that Nevada County has higher rates of suicide, drug overdose deaths and drug overdose deaths specific to opioids than the state. Additionally, secondary data rates of excessive drinking in the county were higher than the state rate. Survey results for frequent drinking were also elevated.

Prevention of unintentional injuries was expressed by interview participants has important in the county. Secondary data showed the deaths due to unintentional injuries for Nevada County was 54.59 deaths per 100,000 compared to the state rate of 31.24. As previously mentioned, deaths due to motor vehicle

crashes were elevated with participants stating that high traffic volume and driving fast on country roads is common in the area.

5. *Access to Specialty and Extended Care*

Specialty care is devoted to a particular branch of medicine and often focuses on the treatment of a particular disease. Primary and specialty care go hand-in-hand, and without access to specialists such as endocrinologists, cardiologists, and gastroenterologists, community residents are often left to manage chronic diseases such as diabetes and high blood pressure on their own. In addition to specialty care, extended care refers to care needed in the community that supports overall physical health and wellness and that extends beyond primary care services, such as skilled nursing facilities, hospice care, in-home healthcare, and the like.

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
- Alzheimer's Mortality - Cancer Mortality - CLD Mortality - Heart Disease Mortality - Hypertension Mortality - Kidney Disease Mortality - Liver Disease Mortality - Stroke Mortality - Diabetes Prevalence - Psychiatry Providers - Specialty Care Providers - Prenatal Care - Prediabetes	- Need for increased specialty care providers across the county – especially endo, cardio, and rheumatology - SNMH lacking in specialty providers - Participants reporting that there are no skilled nursing facilities (SNFs) in the county - Waiting for specialty care takes too long - Need for elderly care – specifically home healthcare - Need a managed care provider network in the county - Patient navigation for specialty care is important and needed due to lack of county providers - Lack of transportation to get to specialty care which includes the need to travel outside the county, or travel a far distance within the county - Need for end-of –life care services, especially with homeless - Need for post-hospital discharge navigation - Accessing specialty care services is difficult – and	- Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good? - Have you ever had sigmoidoscopy and colonoscopy exams? - Have you EVER been told by a doctor, nurse or other health professional you had cancer? - Has a doctor or other healthcare provider EVER told you that you have: A depressive disorder (including depression, major depression, dysthymia, or minor depression) - Do you act as a caregiver for another ADULT, such as spouse, sibling, aunt, uncle, parent or grandparent? - Mental health problems ranked as a top three biggest health need in the community - Access to health care as a top three biggest health need in the community

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
	even more so for those with physical disabilities.	

Access to secondary and extended care providers greatly influences mortality due to various conditions (deaths due to heart disease, hypertension, stroke, kidney disease, liver disease, cancer, Alzheimer's, and diabetes). In addition, survey data shows a high rate of substance abuse and use in area residents, a significant contributor to these chronic conditions.

As shown previously many residents in Nevada County die due to conditions that require specialty care. Interview participants expressed the lack of access to specialty care in the county, indicating the need to travel far distances to receive care for advanced conditions and many residents serving as a caregiver to another adult due to the lack of care available. Secondary data showed that the rate of specialty care providers per 100,000 populations was 162.32 in Nevada County, below the state rate of 183.24. As indicated previously, secondary and primary data showed that mental health providers are also lacking in the county, an important need for residents struggling with advanced mental illness and substance abuse.

6. *Active Living and Healthy Eating*

. Physical activity and eating a healthy diet are extremely important for one's overall health and well-being. Frequent physical activity is vital for prevention of disease and maintenance of a strong and healthy heart and mind. When access to healthy foods is challenging for community residents, many turn to unhealthy foods that are convenient, affordable, and readily available. Communities experiencing social vulnerability and poor health outcomes are often overloaded with fast food and other establishments where unhealthy food is sold.

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
- Cancer Mortality - Heart Disease Mortality - Hypertension Mortality - Kidney Disease Mortality - Stroke Mortality - Cancer Female Breast - Diabetes Prevalence - Cancer Prostate - Limited Access to Healthy Food - Access to Exercise - Female Breast Cancer Mortality - Invasive Cancer Incidence - Prostate Cancer Mortality - Prediabetes	- Price of healthy food "fresh" food is expensive - Community needs more information and skills on how to cook and eat with limited access to healthy food and a small budget, including how to prepare healthy food - Outlying rural areas have little access to healthy food – only small grocery entities - farmer's markets only in summer; limited supplies at the food pantry; especially difficult for those without transportation and for seniors. - Low-income and homeless populations lacking access to healthy foods - Finding affordable, accessible exercise opportunities for kids is difficult in the county - Gyms too expensive for most families - Cost an issue regarding eating healthy – easier to eat fast food available in Truckee - Many residents with poor nutrition in the Truckee area	

Active living and health eating is directly related to the prevention, and maintenance, of various health issues detailed previously in other health needs (including mortality due to heart disease, hypertension, stroke, cancer; and prediabetes and diabetes prevalence). In addition to these outcomes, secondary data also showed that 6.77% of Nevada County residents are low-income and do not live close to a grocery store. This percentage is more than twice the percentage for the state at 3.29%. Coupled with this, 62.39% of Nevada County residents have access to locations for physical activity, clearly lower than the state percent of 89.62%. These secondary data findings were supported by interview results showing that many area residents struggle with access to health food, including how to prepare healthy food for healthy living, and expressed that gym memberships are too expensive.

7. *Access and Functional Needs - Transportation and Physical Disability*

Access and functional needs includes indicators related to transportation and disability. Having access to transportation services to support individual mobility is a necessity of daily life. Without transportation, individuals struggle to meet their basic needs, including those that promote and support a healthy life. Examining the number of people that have a disability is also an important indicator for community health in an effort to ensure that all community members have access to necessities for a high quality of life.

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
- Public Transit Proximity - Percentage with Disability	- Increased need for transportation expressed across the county - Lack of adequate coverage with current public transportation system - Outlying rural areas of the county lacking access to services and care due to no transportation – sometimes using the ambulance for transportation. - Many families lacking personal transportation (their own vehicle) - Lack of transportation hard on seniors, who have difficulty getting to transportation hubs - Transportation is weather dependent in the area making it not always reliable	- Do you act as a caregiver for another ADULT, such as spouse, sibling, aunt, uncle, parent or grandparent? - Mental health problems ranked as a top three biggest health need in the community

Interview participants indicated that lack of transportation in the area presents a barrier to accessing many basic needs and services for area residents, especially seniors. Area residents expressed that the current public transportation system lacks adequate coverage over the county area and many area families do not have their own personal transportation. Secondary data showed the 47.64% of the county population lives in a census block within a quarter mile of a fixed public transit stop, in comparison to 50% of state residents. Aside from public transportation, secondary data showed that Nevada County has a higher percent of residents with a disability at 14.8% compared to the state at 10.60%.

8. Access to Dental Care and Preventative Services

Oral health is important for overall quality of life. When individuals have dental pain, it is difficult to eat, concentrate, and fully engage in life. Poor oral health impacts the health of the entire body, especially the heart and the digestive and endocrine systems.

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
No indicators	- Need for more dental providers – participants reporting a perception that there is only one Medi-Cal dental provider (Denti-Cal) in the county - Long wait times for care – few providers - Area providers lacking capacity to meet the need, including the local community clinics - Only one provider in the eastern area that accepts Denti-Cal (Kings Beach)	- Access to health care as a top three biggest health need in the community

Secondary data on dental care was limited and revealed that Nevada County has a higher percentage of dentists per 100,000 population than the state. However, interview participants indicated that dental prevention and treatment appointments are difficult to access due to few providers and long wait times in the county.

9. *Pollution-Free Living Environment*

Living in a pollution-free environment is essential for health. Individual health is determined by a number of factors, and some models show that one's living environment, including the physical (natural and built) and sociocultural environment, has more impact on individual health than one's lifestyle, heredity, or access to medical services.[8]

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
- Cancer Mortality - CLD Mortality - Cancer Female Breast - Cancer Prostate - Adult Smokers - Drinking Water Violations - E Products Use - Invasive Cancer Incidence	- High asthma rates in the county - Forest fires negatively impacting the air quality - Pesticide exposure – participants reporting that growth of area agricultural (grapes, marijuana) exposes area residents to pesticides	- Do you have asthma? - Do you now smoke cigarettes every day, some days or not at all? - Do you currently use chewing tobacco, snuff, or snus every day, some days or not at all? - During the past 30 days, on how many days did you use marijuana or hashish?

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[8] See Blum, H. L. (1983). *Planning for Health*. New York: Human Sciences Press

Living a pollution-free life is important to the overall health of a community. Exposure to pollution is related to the many health outcomes already detailed in previous health needs (including mortality due to heart disease, hypertension, stroke, cancer; and chronic lung disease) and equally associated with negative personal health behaviors (like smoking and e-product availability and usage). Secondary data also revealed that health-related drinking water violations have been reported in the county.

Asthma prevalence is also related to pollution exposure. Though secondary data rates for asthma prevalence were not elevated, survey results showed that 12% of Nevada County respondents and 15.40% of Tahoe Forest Survey respondents indicated that they have asthma, compared to 8.7% of state respondents.

10. *Safe and Violence-Free Environment*

Feeling safe in one's home and community are fundamental to overall health. Next to having basic needs met (e.g., food, shelter, clothing) is physical safety. Feeling unsafe affects, the way people act and react to everyday life occurrences.

Secondary Quantitative Indicators	Qualitative Interview Themes	Community Health Survey Results
- Poor Mental Health Days - Motor Vehicle Crash Deaths - Opioid Overdose Deaths - ED Visit Opioid Overdose	- Lack of law enforcement presence in rural outlying areas of the county - High volume of traffic accidents and mortality on major roads – people driving very fast - Large amount of domestic abuse in the county - Safety issues related to behavior while under the influence of drugs and/or alcohol	- During the past 30 days, how many DAYS per WEEK did you have at least one drink of any alcoholic beverages? - During the past 30 days, how many DAYS per MONTH did you have at least one drink of any alcoholic beverages? - During the past 30 days, on how many days did you use marijuana or hashish?

Interview participants indicated that the largest contributor to safety issues in Nevada County are related to high traffic volumes and vehicles traveling at high speeds on major roads and accidents/events related to substance use. Motor crash deaths for Nevada County fall at 12.31 deaths per 100,000 compared to 8.50 deaths per 100,000 for the state. As detailed prior, secondary data results for opioid related ED visits and deaths are clearly higher in the county versus the state.

Survey results indicated that alcohol usage is elevated for area residents greatly affecting safety. More than 16.4% of Nevada County survey respondents indicated that they drink alcoholic beverages 5 or more days a week compared to only 3.8% of state respondents. Additionally, 16.80% of county respondents indicated that they drink 16 or more days per month compared to only 7.4% of state survey respondents.

Populations and Locations Experiencing Health Disparities

A health disparity is defined as "preventable differences in the burden of disease, injury, violence, or opportunities to achieve optimal health experienced by populations, and defined by factors such as race

or ethnicity, gender, education or income, disability, geographic location or sexual orientation." [9] Figure 3 and Table 2 describe populations and geographical locations in Nevada County identified via qualitative data collection that were indicated as experiencing health disparities.

Interview participants were asked two separate questions:
1. What specific groups of community members experience health issues the most?
2. What specific geographic locations struggle with health issues the most?

Interview results were analyzed by counting the total number of times all key informants and focus-group participants mentioned a particular group as one experiencing disparities during an interview. Figure 3 displays the results of this analysis. In addition, locations consistently mentioned by participants as being disproportionately affected by disparities were noted and are detailed in alphabetical order in Table 2.

Frequency of mention in interviews
(Number of times participant mentioned population group)
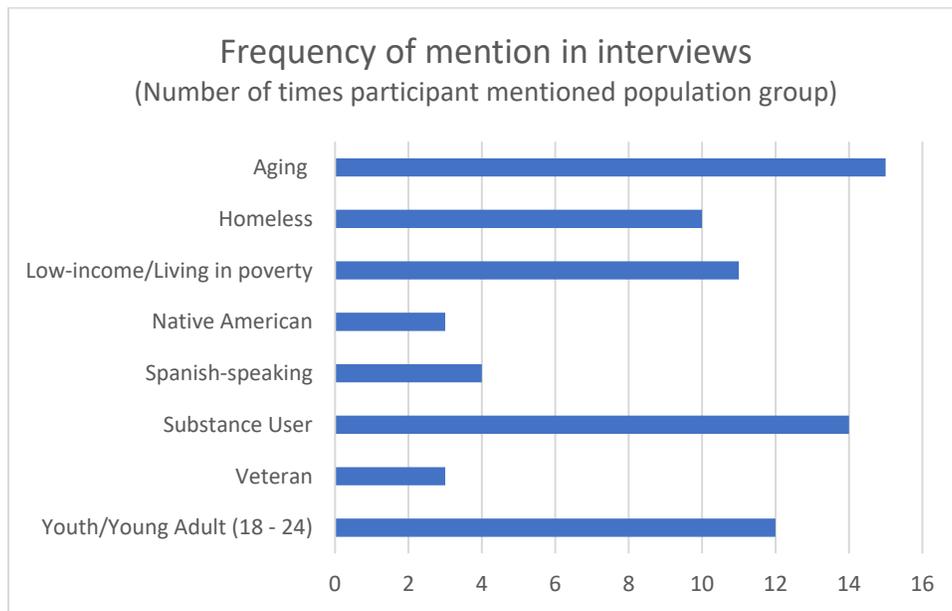
Figure 3: Populations experiencing disparities for Nevada County

Table 2 displays geographic locations across Nevada County mentioned as areas of the county experiencing social and health disparities. Data presented were collected from key informant interviews where participants were asked to identify and describe areas of the county where disparities existed. In most cases, participants were provided with a map of the county to draw and write on for recording the detailed data contained in Table 2. The attributes in Table 2 come directly from the written maps and key informant interview notes.

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[9] Modified from: Center for Disease Control and Prevention. (2008) Community Health and Program Services (CHAPS): Health Disparities Among Racial/Ethnic Populations. Atlanta: U.S. Department of Health and Human Service.

Table 2: Geographic Locations Experiencing Disparities

Geographic Locations Mentioned in Interviews	Attributes of Locations
Grass Valley	Large percentage of aging population; homelessness; transportation issues; low-income; many families with young children; notable presence of marijuana in the area including usage and growing; many "trimmigrants"[10]
North San Juan	Poverty; social isolation; substance abuse; lacking services; homelessness; presence of marijuana in the area; lack of transportation; veteran population; large aging population; large percentage of aging population; many families with young children
Rough and Ready	Social isolation; poverty; substance abuse; lacking services
Washington	Low population density; lacking services; homelessness; presence of marijuana in the area; mistrust of government services, isolation; lack of transportation; large veteran population; large aging population
Truckee	Most diverse area of the county; large Spanish-speaking population; large number of tourists/visitors;
Penn Valley	Low-income; transportation issues

Communities of Concern

Communities of Concern are geographic areas within the county that have the greatest concentration of poor health outcomes and are home to more medically underserved, low-income, and diverse populations at greater risk for poorer health. Communities of Concern are important to the overall CHNA/CHA methodology because, after the county has been assessed more broadly, identifying them allows for a focus on those portions of the county likely experiencing the greatest health disparities.

Geographic Communities of Concern were identified using a combination of primary and secondary data sources. A general description of this process is provided here. (Interested readers are referred to the technical section of this report for an in-depth description). Three secondary data factors were considered in determining if ZIP Codes within the service area would be identified as geographic Communities of Concern: 1) whether they were identified as Communities of Concern in the 2016 CHNA, 2) if they intersected census tracts with the highest 20% of Community Healthy Vulnerability Index (CHVI) scores in the service area, and 3) if they consistently had among the highest mortality indicator values in the county. ZIP Codes with any of these three criteria were combined with the list of geographic locations consistently mentioned in initial area-wide primary data (detailed in Table 2) to result in a final set of geographic Communities of Concern. (Population experiencing disparities were identified based on the results of primary data and are detailed in Figure 2).

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[10] Trimmigrants are people who come into an area in search of marijuana harvest jobs.

Analysis of both primary and secondary data revealed four ZIP Codes that met the criteria to be classified as Communities of Concern. Two ZIP Codes were identified as primary Communities of Concern, while two ZIP Codes were identified as secondary. The latter were labeled as secondary Communities of Concern for two reasons: 1) they were identified by local experts as geographic areas of the county with vulnerable populations and 2) they have small population census counts. These are noted in Table 3, with the census population provided for each, and they are displayed in Figure 4.

Table 3: Identified Communities of Concern for Nevada County

ZIP Code	Community/Area*	Population
Primary Communities of Concern		
95945	Grass Valley	25,712
96161	Truckee**	18,255*
Secondary Communities of Concern		
95960	North San Juan	752*
95986	Washington	79
Total Population in Communities of Concern		44,798*
Total Population in Nevada County		98,639
Approximate Percentage of Nevada County		45.0%*

(Source: 2012-2016 American Community Survey 5-year estimates; U.S. Census Bureau)
*Includes population outside of Nevada County
** For context in interpreting results contained in this report for the City of Truckee, ZIP code 96161 extends beyond the city limit and includes outlying areas of Truckee

Figure 4 displays the ZIP Codes that are Communities of Concern for Nevada County. ZIP Codes in pink are primary Communities of Concern, while ZIP Codes in blue are secondary
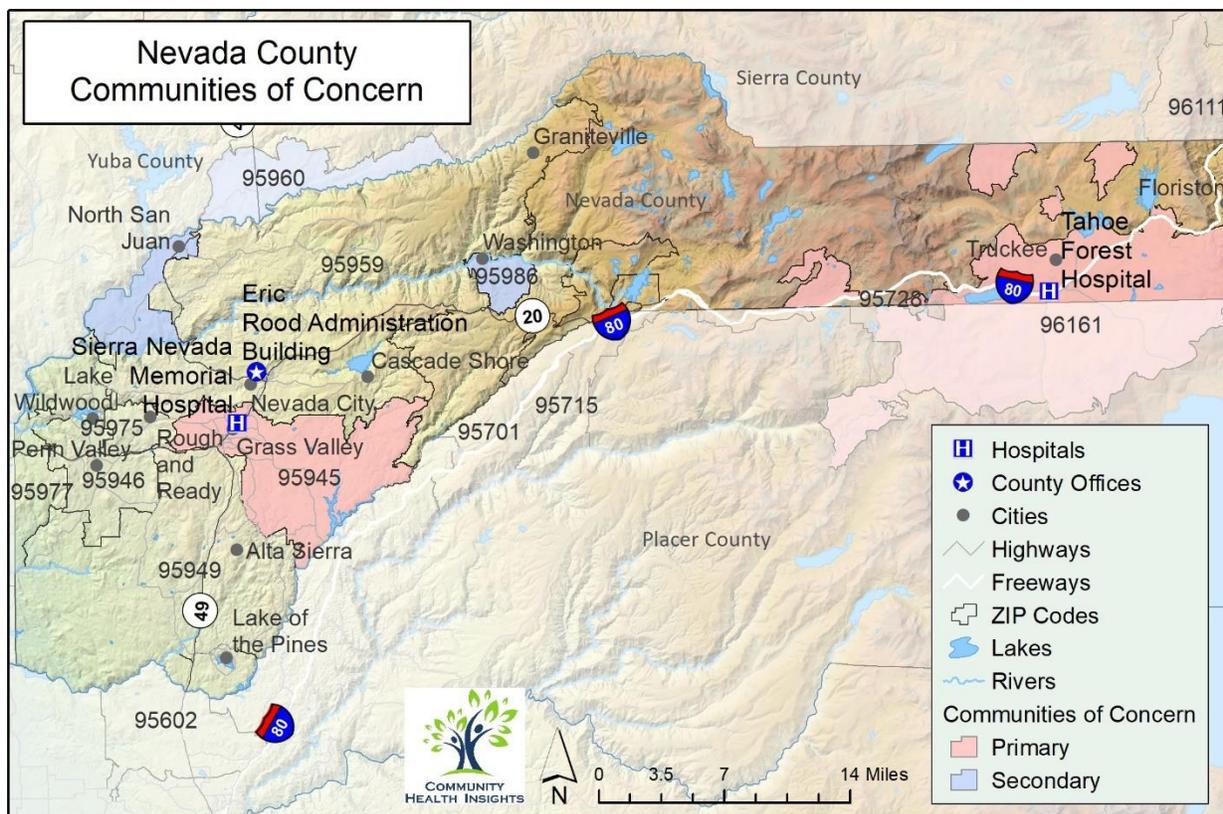
Figure 4: Communities of Concern for Nevada County

Method Overview

Conceptual and Process Models

The data used to conduct the CHNA/CHA were identified and organized using the widely recognized Robert Wood Johnson Foundation's County Health Rankings model.[11] This model of population health includes many factors that impact and account for individual health and well-being. Further, to guide the overall process of conducting the assessment, a defined set of data-collection and analytic stages were developed. For a detailed overview of methods see the technical section (pp. 37-116).

Data Used in the CHNA/CHA

Data collected and analyzed included both primary and secondary data. Primary data included eight interviews with 32 community health experts as well as five focus groups with a total of 19 community residents[12]. In addition, a countywide survey was conducted with 412 community members of Nevada

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[11] See http://www.countyhealthrankings.org/

[12] Through a data agreement between CHI and Tahoe Forest Hospital (TFH) focus group data from a 2017 CHNA assessment was acquired and added to the sample for this CHNA/CHA work. TFH provided the partnership with focus group data for two focus groups conducted in the Truckee area. The entire TFH assessment can be found here: https://www.tfhd.com/sites/default/files/2018%20TFHS%20CHNA%20report%20FINAL.pdf

County. (Details about CHNA/CHA participants can be seen in the technical section of this report.) These results, when appropriate, were combined with findings from a survey conducted by Tahoe Forest Hospital in 2017, focused on the Truckee area (the eastern portion of the county).

Secondary data included four datasets selected for use in the various stages of analysis. A combination of mortality and socioeconomic datasets collected at sub county levels were used to identify portions of Nevada County with greater concentrations of disadvantaged populations and poor health outcomes. A set of county-level indicators was collected from various sources to help identify and prioritize significant health needs. A set of socioeconomic indicators was also collected to help describe the overall social conditions within the service area. Health-outcome indicators included measures of both mortality (length of life) and morbidity (quality of life). Health-factor indicators included measures of 1) health behaviors, such as diet and exercise and, tobacco, alcohol, and drug use; 2) clinical care, including access and quality of care; 3) social and economic factors such as race/ethnicity, income, educational attainment, employment, neighborhood safety, and similar; and 4) the physical environment measures, such as air and water quality, transit and mobility resources, and housing affordability. In all, 92 different health-outcome and health-factor indicators were collected for the CHNA/CHA.

Data Analysis

Primary and secondary data were analyzed to identify and prioritize the significant health needs within Nevada County. This began by identifying 10 potential health needs (PHNs). These PHNs were similar to those identified in the previously conducted CHNA for SNMH in 2016. Data were analyzed to discover which, if any, of the PHNs were present in the area. After these were identified, PHNs were prioritized based on an analysis of primary data sources that described the PHN as a significant health need.

For an in-depth description of the processes and methods used to conduct the CHNA/CHA, including primary and secondary data collection, analysis, and results, see the technical section of this report (pp. 37-116).

Description of Community Served

Nevada County is located on the western slope of the Sierra Nevada foothills consisting of approximately 978 square miles. The county is rural with deep historical significance for the state of California as the home of the California Gold Rush of 1849. The three major incorporated cities in the county are Grass Valley, Nevada City and the Town of Truckee. Nevada City was founded in 1849, and the county was later named Nevada County in 1851. (The founding of the state of Nevada followed in 1861.) Nevada City downtown district is a national historical landmark with "old fashion hospitality."

Community service providers and community members described Nevada County during primary data collection for the CHNA/CHA as: diverse in income and in age, and largely rural with many long time county residents. Participants also expressed their appreciation for the area describing it as "physically beautiful", "a small close knit community with very friendly people", and a "community with a heart." A map of Nevada County is shown in Figure 5.
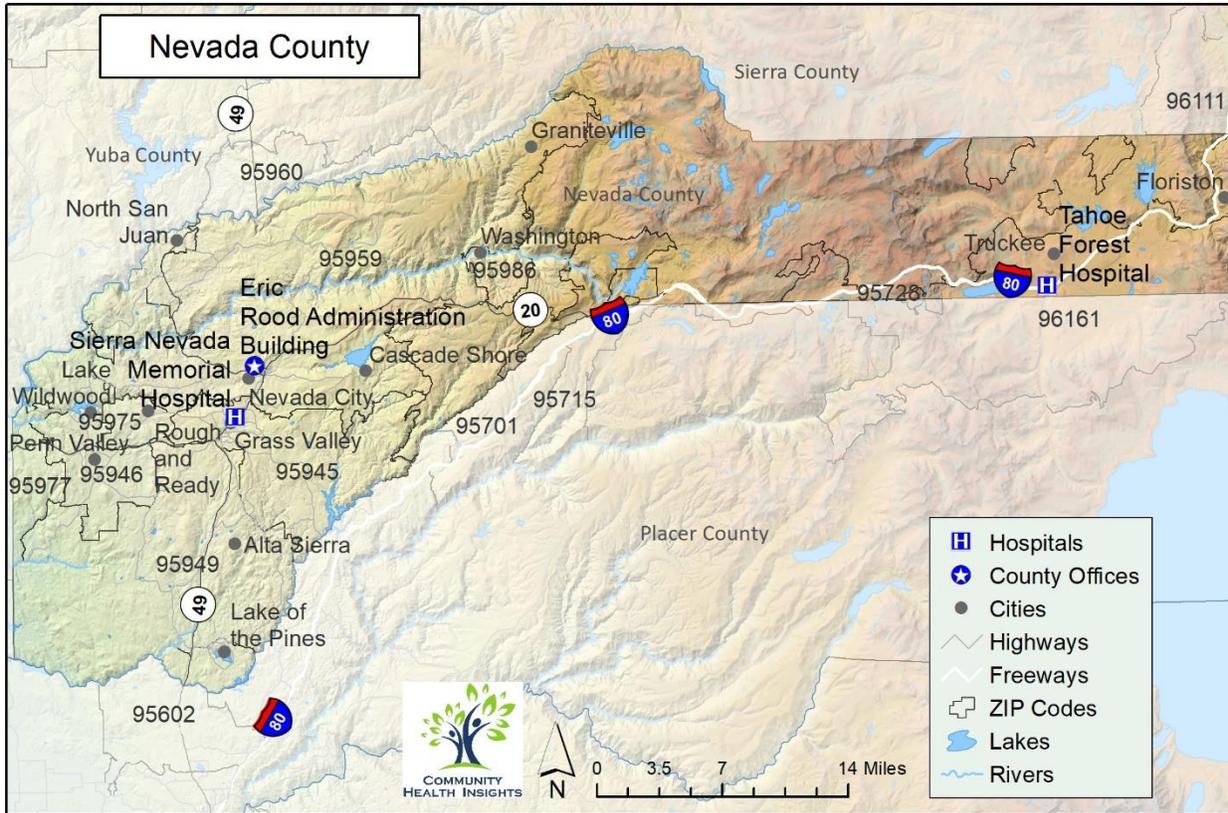
Figure 5: Nevada County Area

Population characteristics for each ZIP Code in Nevada County are presented in Table 4. The data provided below help give a deep understanding of how the county's communities differ based on various social determinants of health. Data provided are compared to the state and county rates, and ZIP Codes that deviated when compared to the county benchmark are highlighted. Cells where ZIP Code data were not available are denoted with a double hash mark (--).

Table 4: Population Characteristics for Each ZIP Code Located in Nevada County

ZIP Code	Total Population	% Minority*	Median Age	Median Income	% Poverty	% Unemployed	% Uninsured	% No HS Graduation	% Living in High Housing Costs	% with Disability
95602	18,472	18.9%	50.0	$66,114	10.8%	7.5%	10.3%	7.6%	41.8%	15.3%
95728	366	0.0%	42.4	$58,107	0.0%	7.0%	23.0%	0.0%	13.3%	9.6%
95945	25,712	12.7%	50.9	$43,636	19.3%	10.0%	11.1%	7.3%	43.9%	21.8%
95946	9,694	15.9%	52.3	$62,351	14.3%	10.9%	12.8%	4.6%	40.0%	15.0%
95949	19,575	8.9%	53.9	$58,861	7.6%	8.2%	9.5%	6.2%	39.6%	14.4%
95959	17,534	13.4%	53.1	$59,446	11.9%	10.3%	11.4%	5.7%	37.7%	11.4%
95960	752	12.6%	37.1	$37,500	29.9%	11.5%	23.8%	12.6%	32.8%	14.9%
95975	1,811	37.1%	50.1	$65,221	16.5%	5.0%	18.2%	9.5%	27.8%	28.4%
95977***	1,730	18.8%	26.6	$40,313	9.2%	1.3%	27.1%	6.2%	50.2%	11.0%
95986	79	0.0%	69.9	--	24.1%	0.0%	0.0%	24.1%	11.1%	50.6%
96111	30	0.0%	63.1	$34,297	0.0%	0.0%	0.0%	0.0%	60.8%	0.0%
96161	18,255	20.5%	39.3	$79,457	6.9%	7.1%	11.7%	8.5%	38.9%	6.5%
Nevada County	98,639	14.4%	49.5	$57,429	12.1%	8.8%	11.2%	6.7%	40.1%	14.8%
California	38,654,206	61.6%	36.0	$63,783	15.8%	8.7%	12.6%	17.9%	42.9%	10.6%

(Source: 2012 - 2016 American Community Survey 5-year estimates; US Census Bureau)
* Percentage of the population that is Hispanic or reports at least one race that is not white
** Percentage of the population for whom total housing costs exceed 30% of income
*** ZIP Code 95977 extends both Nevada and Yuba counties with a large portion in Yuba.

Community Health Vulnerability Index

Figure 6 displays the Community Health Vulnerability Index (CHVI) for Nevada County. The CHVI is a composite index used to help explain the distribution of health disparities within the county. Like the Community Need Index or CNI[13] on which it was based, the CHVI combines multiple sociodemographic indicators to help identify those locations experiencing health disparities. CHVI values indicate a greater concentration of groups supported in the literature as being more likely to experience health-related disparities. (Interested readers are referred to the technical section of this report for further details as to the CHVI construction). CHVI indicators are as follows:

[13] Barsi, E. and Roth, R. (2005) The Community Need Index. *Health Progress*, Vol. 86, No. 4, pp. 32–38.

Table 5: Community Health Vulnerability Index Indicators

Percentage Minority (Hispanic or Nonwhite)	Percentage Families with Children in Poverty
Percentage 5 Years or Older Who Speak Limited English	Percentage Households 65 Years or Older in Poverty
Percentage 25 or Older without a High School Diploma	Percentage Single Female-Headed Households in Poverty
Percentage Unemployed	Percentage Renters
Percentage Uninsured	
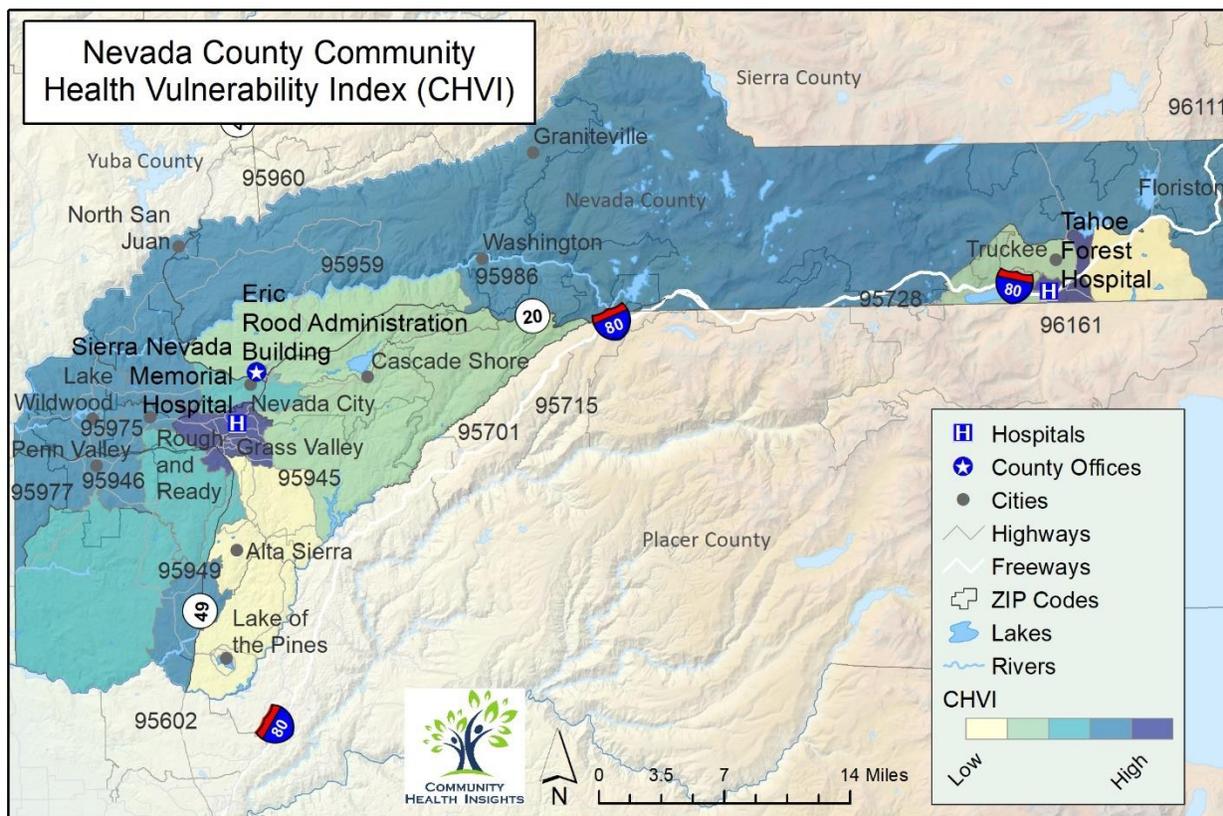
Figure 6: Community Health Vulnerability Index (CHVI) for Nevada County

The census tracts with the highest overall CHVI scores (greatest vulnerability – top 20th percentile) included the main area of central Grass Valley and the Town of Truckee. Further, outlying rural areas including North San Juan, Washington, and Penn Valley fell into the second highest CHVI score category (top 40th percentile) for vulnerability.

Resources Potentially Available to Meet the SHNs for Nevada County

In all, 110 resources were identified in the Nevada County area that were potentially available to meet the identified significant health needs. The identification method included starting with the list of resources from the 2016 hospital-based CHNAs, verifying that each resource still existed, and then adding newly identified resources into the 2019 CHNA/CHA report. Examination of the resources revealed the following numbers of resources for each significant health need as shown in Table 6.

Table 6: Resources Potentially Available to Meet Significant Health Needs in Priority Order for Nevada County

Significant Health Need (in priority order)	Number of resources
Access to basic needs such as housing, jobs, and food	68
Access to quality primary healthcare services	36
Access to mental/behavior/substance abuse services	45
Injury-and disease-prevention and management	21
Access to specialty and extended care	8
Active living and healthy eating	25
Access and functional needs (transportation and physical mobility)	5
Access to dental care and preventive services	5
Pollution-free living environment	3
Safe and violence-free environment	30

For more specific examination of resources by significant health need and by geographic locations, as well as the detailed method for identifying these, see the technical section.

Conclusion

This joint CHNA/CHA report details the identified health needs of the Nevada County community as a part of a successful collaborative partnership between SNMH and NCPHD. It provides both an overall health and social examination of Nevada County, and a deeper examination of the needs of community members living within areas of the county experiencing disproportionate burdens.

Nevada County 2019 CHNA/CHA Technical Section

The following section presents a detailed account of data collection, analysis, and results, as well as appendices to the CHNA/CHA report for Nevada County.

Results of Data Analysis for Nevada County

Secondary Data

The tables and figures that follow show the specific values for the health need indicators used as part of the health need identification process and organized using the County Health Rankings Model displayed in Figure 13. Each indicator value for Nevada County was compared to the California state benchmark. Indicators where performance was worse in the county than in the state benchmark are highlighted in Tables 7-12 and labeled as poor performing in Figures 7-12.

> All references for the data presented in Tables 7-12 and Figures 7-12 are contained in Table 19.

Length of Life

Table 7: Length of Life Indicators Compared to State Benchmarks

Indicators	Description	Nevada County	California
Early Life			
Infant Mortality	Infant deaths per 1,000 live births – rate	3.96	4.50
Child Mortality	Deaths among children under age 18 per 100,000 – rate	32.88	38.46
Overall			
Life Expectancy	Average life expectancy at birth in years	81.30	80.82
Age-Adjusted Mortality	Age-adjusted deaths per 100,000 – rate	596.70	608.50
Premature Age-Adjusted Mortality	Age-adjusted deaths among residents under age 75 per 100,000 – rate	256.90	268.80
Years of Potential Life Lost	Age-adjusted years of potential life lost before age 75 per 100,000 – rate	5,913.61	5,217.32
Cancer			
Cancer Mortality	Deaths per 100,000 – rate	230.25	153.44
Female Breast Cancer Mortality	Age-adjusted deaths per 100,000 – rate	25.80	19.10
Colorectal Cancer Mortality	Age-adjusted deaths per 100,000 – rate	10.50	12.80
Lung Cancer Mortality	Age-adjusted deaths per 100,000 – rate	27.80	28.90
Prostate Cancer Mortality	Age-adjusted deaths per 100,000 – rate	20.00	19.60
Liver and Kidney Disease			
Liver Disease Mortality	Deaths per 100,000 – rate	14.36	13.18
Kidney Disease Mortality	Deaths per 100,000 – rate	10.88	8.30
Chronic Disease			

Indicators	Description	Nevada County	California
Stroke Mortality	Deaths per 100,000 – rate	52.43	37.51
CLD Mortality	Deaths per 100,000 – rate	69.26	34.92
Diabetes Mortality	Deaths per 100,000 – rate	16.92	22.07
Heart Disease Mortality	Deaths per 100,000 – rate	224.08	157.33
Hypertension Mortality	Deaths per 100,000 – rate	13.04	12.57
Intentional and Unintentional Injuries			
Suicide Mortality	Deaths per 100,000 – rate	20.22	10.78
Unintentional Injury Mortality	Deaths per 100,000 – rate	54.59	31.24
Other			
Alzheimer's Mortality	Deaths per 100,000 – rate	60.54	35.03
Influenza Pneumonia Mortality	Deaths per 100,000 – rate	21.48	15.96
Opioid Overdose Deaths	Age-adjusted opioid overdose deaths per 100,000 – rate	5.47	4.49

Length of Life

■ Nevada County Rate   ■ Nevada County Rate (Poor Performing)

● California Rate (value listed above mark)

Early Life

Infant Mortality	4.0	● 4.5
Child Mortality	32.9	● 38.5

Overall

Life Expectancy	81.3	● 80.8
Age-Adjusted Mortality	596.7	● 608.5
Premature Age-Adjusted Mortality	256.9	● 268.8
Years of Potential Life Lost	5,913.6	● 5,217.3

Cancer

Cancer Mortality	230.2	● 153.4
Female Breast Cancer Mortality	25.8	● 19.1
Colorectal Cancer Mortality	10.5	● 12.8
Lung Cancer Mortality	27.8	● 28.9
Prostate Cancer Mortality	20.0	● 19.6

Liver and Kidney Disease

Liver Disease Mortality	14.4	● 13.2
Kidney Disease Mortality	10.9	● 8.3

Chronic Disease

Stroke Mortality	52.4	● 37.5
CLD Mortality	69.3	● 34.9
Diabetes Mortality	16.9	● 22.1
Heart Disease Mortality	224.1	● 157.3
Hypertension Mortality	13.0	● 12.6

Intentional and Unintentional Injuries

Suicide Mortality	20.2	● 10.8
Unintentional Injury Mortality	54.6	● 31.2

Other

Alzheimer's Mortality	60.5	● 35.0
Influenza Pneumonia Mortality	21.5	● 16.0
Opioid Overdose Deaths	5.5	● 4.5

Figure 7: Length of life indicators compared to state benchmarks

Quality of Life

Table 8: Quality of Life Indicators Compared to State Benchmarks

Indicators	Description	Nevada County	California
Chronic Disease			
Prediabetes	Percentage of adults with prediabetes	54.00%	48.00%*
Asthma	Asthma emergency department (ED) visit per 100,000 – rate	33.60	45.80
Percent with Disability	Percentage of total civilian noninstitutionalized population with a disability	14.80%	10.60%
Diabetes Prevalence	Percentage age 20 and older with diagnosed diabetes	8.70%	8.50%
HIV Prevalence	Persons age 13 or older with Human Immunodeficiency Virus (HIV) infection per 100,000 – rate	89.90	376.40
Low Birth Weight	Percentage of live births with birthweight below 2,500 grams	5.82%	6.78%
Hepatitis C Virus	Cases per 100,000 – rate	73.30	86.40
Cancer			
Cancer Female Breast	Age-adjusted incidence per 100,000 – rate	131.27	120.57
Cancer Colon and Rectum	Age-adjusted incidence per 100,000 – rate	32.48	37.08
Cancer Lung and Bronchus	Age-adjusted incidence per 100,000 – rate	44.09	44.63
Cancer Prostate	Age-adjusted incidence per 100,000 – rate	109.21	109.16
Invasive Cancer Incidence	Age-adjusted cases per 100,000 – rate	402.99	398.88
Mental Health			
Poor Mental Health Days	Age-adjusted average number of mentally unhealthy days reported in past 30 days – rate	3.64	3.54
Poor Physical Health Days	Age-adjusted average number of physically unhealthy days reported in past 30 days – rate	3.21	3.51
Nonfatal Poisoning	Number of non-fatal hospitalizations due to unintentional poisoning per 100,000 – rate	75.30	34.40

*Northern and Sierra counties rate[14]

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[14] Definition of Northern and Sierra rate is contained in Babey SH, Wolstein J, Diamant AL, Goldstein H. Prediabetes in California: Nearly Half of California Adults on Path to Diabetes. Los Angeles, CA: UCLA Center for Health Policy Research and California Center for Public Health Advocacy, 2016.

Quality of Life

■ Nevada County Rate   ■ Nevada County Rate (Poor Performing)
● California Rate (value listed above mark)

Chronic Disease

Indicator	Nevada County Rate	California Rate
Prediabetes	54.0	48.0
Asthma	33.6	45.8
Percentage with Disability	14.8	10.6
Diabetes Prevalence	8.7	8.5
HIV Prevalence	89.9	376.4
Low Birth Weight	5.8	6.8
Hepatitis C Virus	73.3	86.4

Cancer

Indicator	Nevada County Rate	California Rate
Cancer Female Breast	131.3	120.6
Cancer Colon and Rectum	32.5	37.1
Cancer Lung and Bronchus	44.1	44.6
Cancer Prostate	109.2	109.2
Invasive Cancer Incidence	403.0	398.9

Mental Health

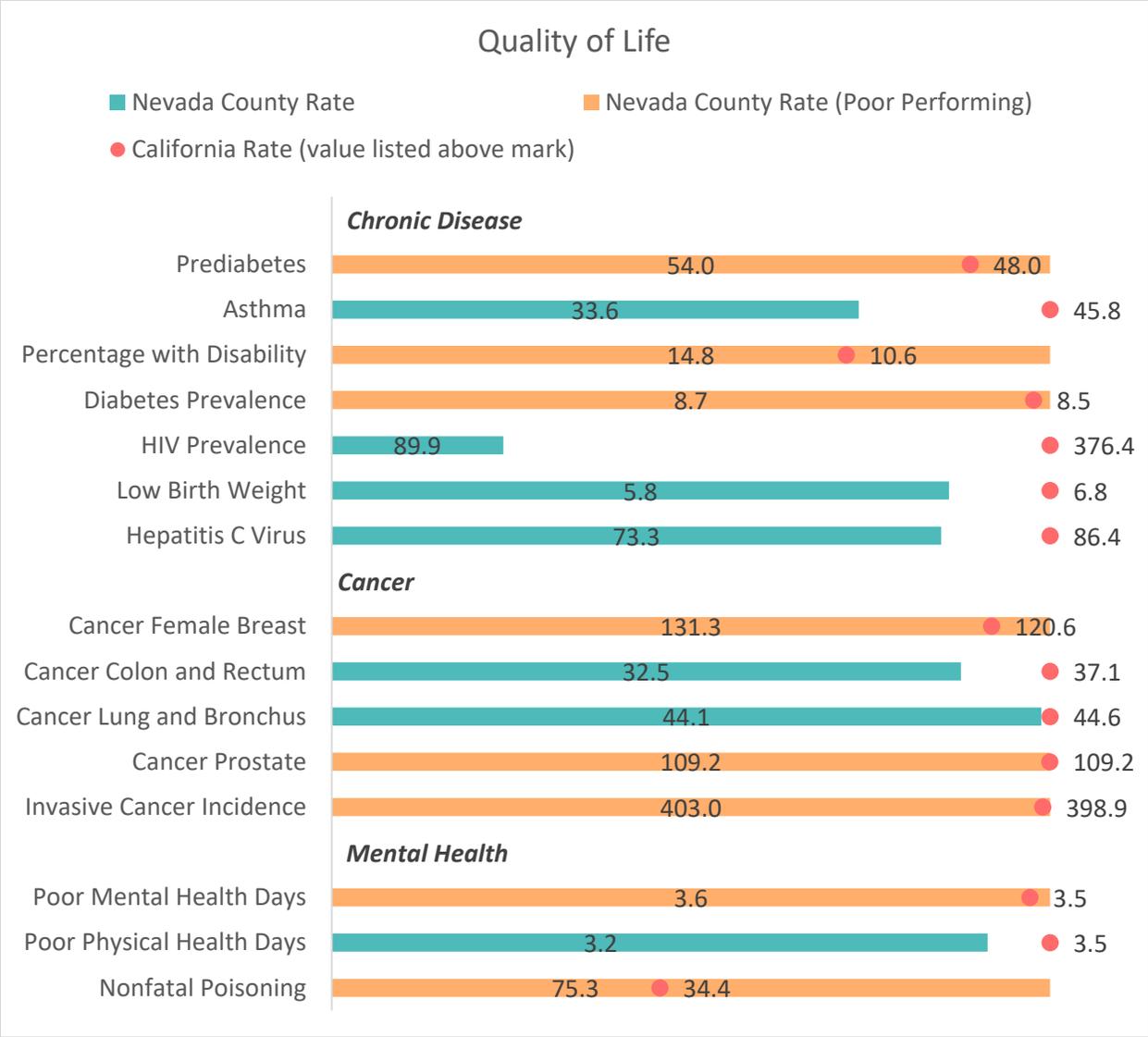| Indicator	Nevada County Rate	California Rate
Poor Mental Health Days	3.6	3.5
Poor Physical Health Days	3.2	3.5
Nonfatal Poisoning	75.3	34.4

Figure 8: Quality of life indicators compared to state benchmarks

Health Behaviors

Table 9: Health Behavior Indicators Compared to State Benchmarks

Indicators	Description	Nevada County	California
Excessive Drinking	Percentage of adults reporting binge or heavy drinking	19.09%	17.81%
Drug Overdose Deaths	Age-adjusted deaths per 100,000 – rate	21.90	12.20
Substance Use Hospitalizations	Non-fatal hospitalizations due to alcohol and/or other drugs per 100,000 – rate	145.50	143.40
Emergency Department (ED) Utilization Substance Use	Number of non-fatal emergency department visits due to alcohol and/or other drugs per 100,000 – rate	662.30	453.00
Unintentional Poisonings	Number of non-fatal emergency department (ED) visits due to unintentional poisonings per 100,000 – rate	105.80	97.60
Emergency Department (ED) Visit Opioid Overdose	Age-adjusted opioid overdose ED visits per 100,000 – rate	22.03	10.31
Adult Obesity	Percentage of adults reporting BMI of 30 or more	21.10%	22.70%
Physical Inactivity	Percentage age 20 and older with no reported leisure-time physical activity	16.70%	17.90%
Limited Access to Healthy Food	Percentage of population that is low-income and does not live close to a grocery store	6.77%	3.29%
mRFEI	Percentage of food outlets that are classified as 'healthy'	19.39%	12.29%
Access to Exercise	Percentage of population with adequate access to locations for physical activity	62.39%	89.62%
Food Insecurity Children	Percentage of children experiencing food insecurity	23.00%	23.00%
Food Insecurity Overall	Percentage of population experiencing food insecurity	14.00%	14.00%
Youth Obesity Rates	Percentage of persons aged 5-19 years that are obese	15.60%	23.30%
In Hospital Exclusive Breastfeeding	Percentage of infants exclusively breast fed in hospital	89.60%	69.60%
Chlamydia Rate	Cases per 100,000 – rate	223.50	552.10
Gonorrhea Rate	Cases per 100,000 – rate	62.00	190.50
Teen Birth Rate	Number of births per 1,000 females aged 15-19- rate	13.98	24.05
Adult Smokers	Percentage of adults who are current smokers	11.80%	10.97%
E Products Use	Percentage of tobacco retailer stores selling electronic smoking devices (including e-cigarettes, other vapor devices or e liquids)	72.00%	62.30%
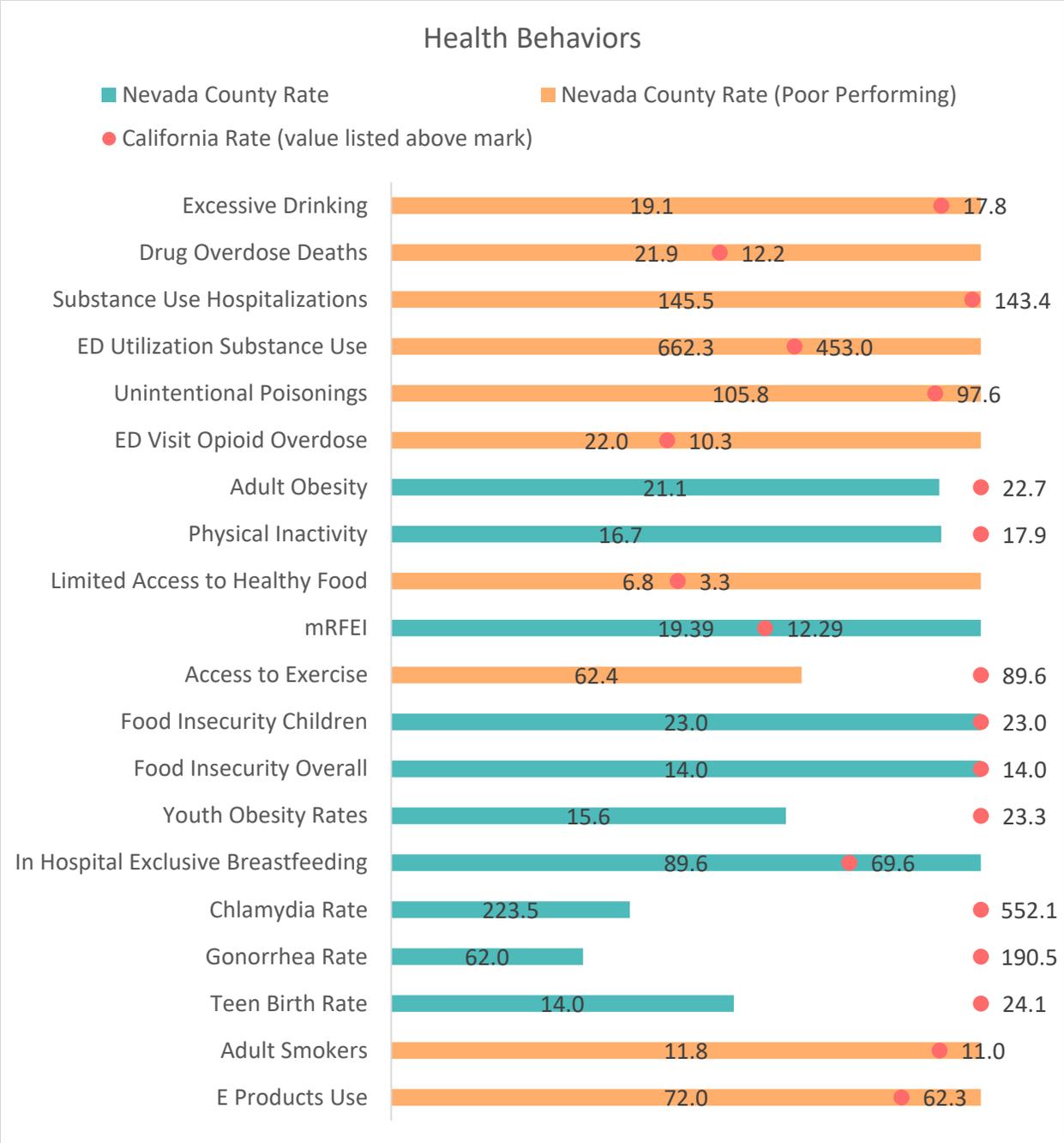
Figure 9: Health behavior indicators compared to state benchmarks

Clinical Care

Table 10: Clinical Care Indicators Compared to State Benchmarks

Indicators	Description	Nevada County	California
Healthcare Costs	Amount of price-adjusted Medicare reimbursements per enrollee – rate	7,151.77	9,100.13
HPSA Dental Health	Reports if a portion of the county falls within a Health Professional Shortage Area	No	
HPSA Mental Health	Reports if a portion of the county falls within a Health Professional Shortage Area	Yes	
HPSA Primary Care	Reports if a portion of the county falls within a Health Professional Shortage Area	Yes	
HPSA Medically Underserved Area	Reports if a portion of the county falls within a Medically Underserved Area	Yes	
Mammography Screening	Percentage of female Medicare enrollees aged 67-69 that receive mammography screening	69.23%	59.66%
Dentists	Number per 100,000 – rate	86.77	82.35
Mental Health Providers	Number per 100,000 – rate	623.57	308.21
Psychiatry Providers	Number per 100,000 – rate	9.13	13.42
Specialty Care Providers	Number per 100,000 – rate	162.32	183.24
Primary Care Physicians	Number per 100,000 – rate	80.91	78.05
Immunization Rates 7th Grade	Percentage of 7th grade entrants with TDAP completed	90.50%	98.40%
Immunization Rates Kindergarten	Percentage of Kindergarten entrants with all required immunizations	81.70%	95.10%
Prenatal Care	Percentage of infants receiving prenatal care in beginning in the first trimester	69.72%	83.20%
Preventable Hosp. Stays	Number of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees – rate	33.44	36.16

Clinical Care

- ■ Nevada County Rate
- ■ Nevada County Rate (Poor Performing)
- ● California Rate (value listed above mark)

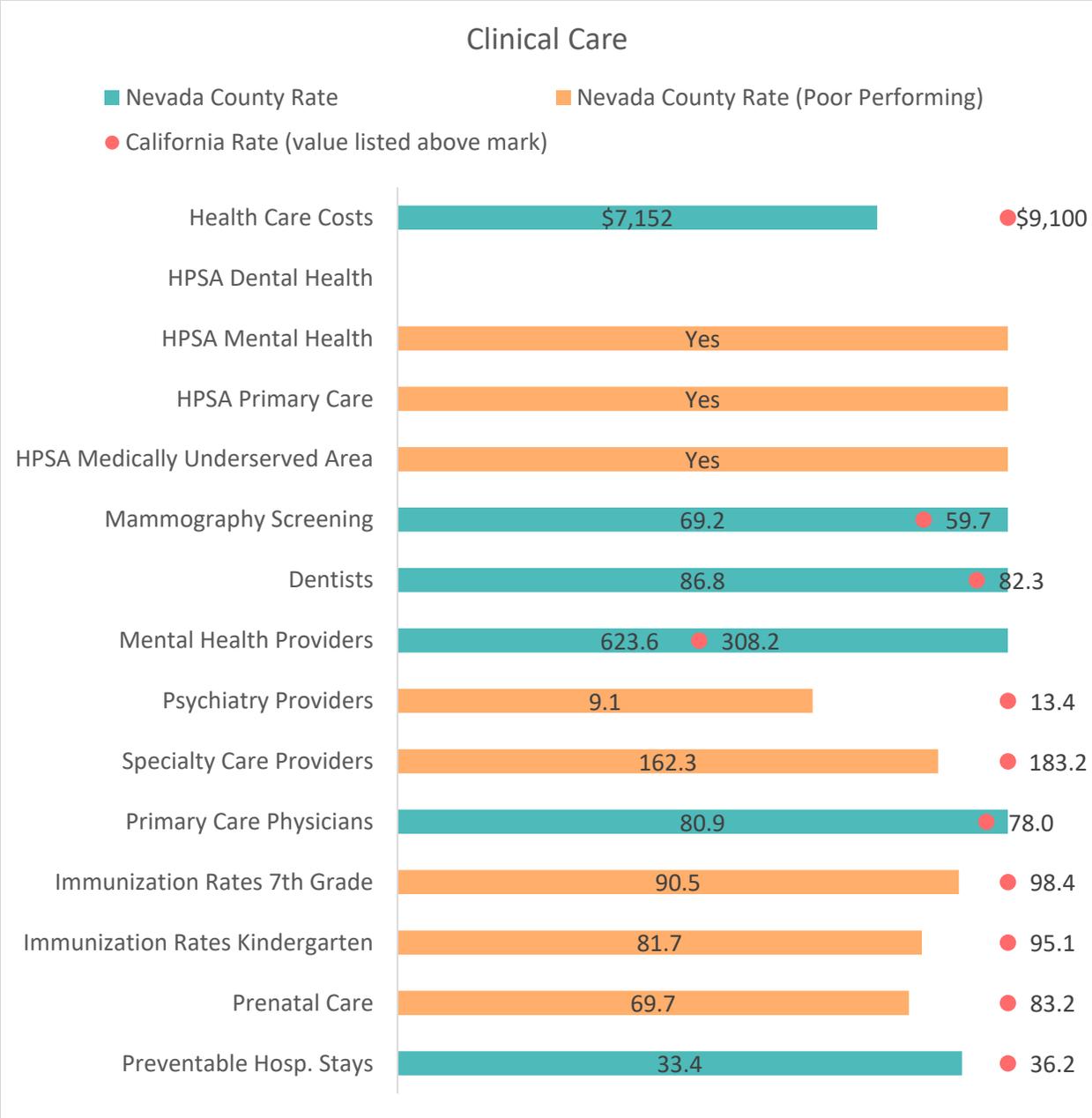| Indicator	Nevada County Rate	California Rate
Health Care Costs	$7,152	$9,100
HPSA Dental Health		
HPSA Mental Health	Yes	
HPSA Primary Care	Yes	
HPSA Medically Underserved Area	Yes	
Mammography Screening	69.2	59.7
Dentists	86.8	82.3
Mental Health Providers	623.6	308.2
Psychiatry Providers	9.1	13.4
Specialty Care Providers	162.3	183.2
Primary Care Physicians	80.9	78.0
Immunization Rates 7th Grade	90.5	98.4
Immunization Rates Kindergarten	81.7	95.1
Prenatal Care	69.7	83.2
Preventable Hosp. Stays	33.4	36.2

Figure 10: Clinical care indicators compared to state benchmarks

Social and Economic/ Demographic Factors

Table 11: Social and Economic/Demographic Factor Indicators Compared to State Benchmarks

Indicators	Description	Nevada County	California
Homicides	Deaths per 100,000 – rate	1.59	4.97
Violent Crimes	Reported violent crime offenses per 100,000 – rate	332.00	407.01
Motor Vehicle Crash Deaths	Deaths per 100,000 – rate	12.31	8.50
Some College	Percentage aged 25-44 with some post-secondary education	69.91%	63.55%
High School Graduation	Percentage of ninth-grade cohort graduating high school in 4 years	46.93%	82.27%
Unemployed	Percentage of population 16 and older unemployed but seeking work	4.75%	5.43%
Children with Single Parents	Percentage of children living in a household headed by a single parent	26.90%	31.84%
Social Associations	Membership associations per 100,000 – rate	9.41	5.77
Free Reduced Lunch	Percentage of children in public schools eligible for free or reduced-price lunch	45.03%	58.91%
Children in Poverty	Percentage of children under age 18 in poverty	13.70%	19.90%
Median Household Income	Median household income	$60,501	$67,715
Uninsured	Percentage of population under age 65 without health insurance	8.10%	9.72%

Social and Economic Factors

- Nevada County Rate
- Nevada County Rate (Poor Performing)
- California Rate (value listed above mark)

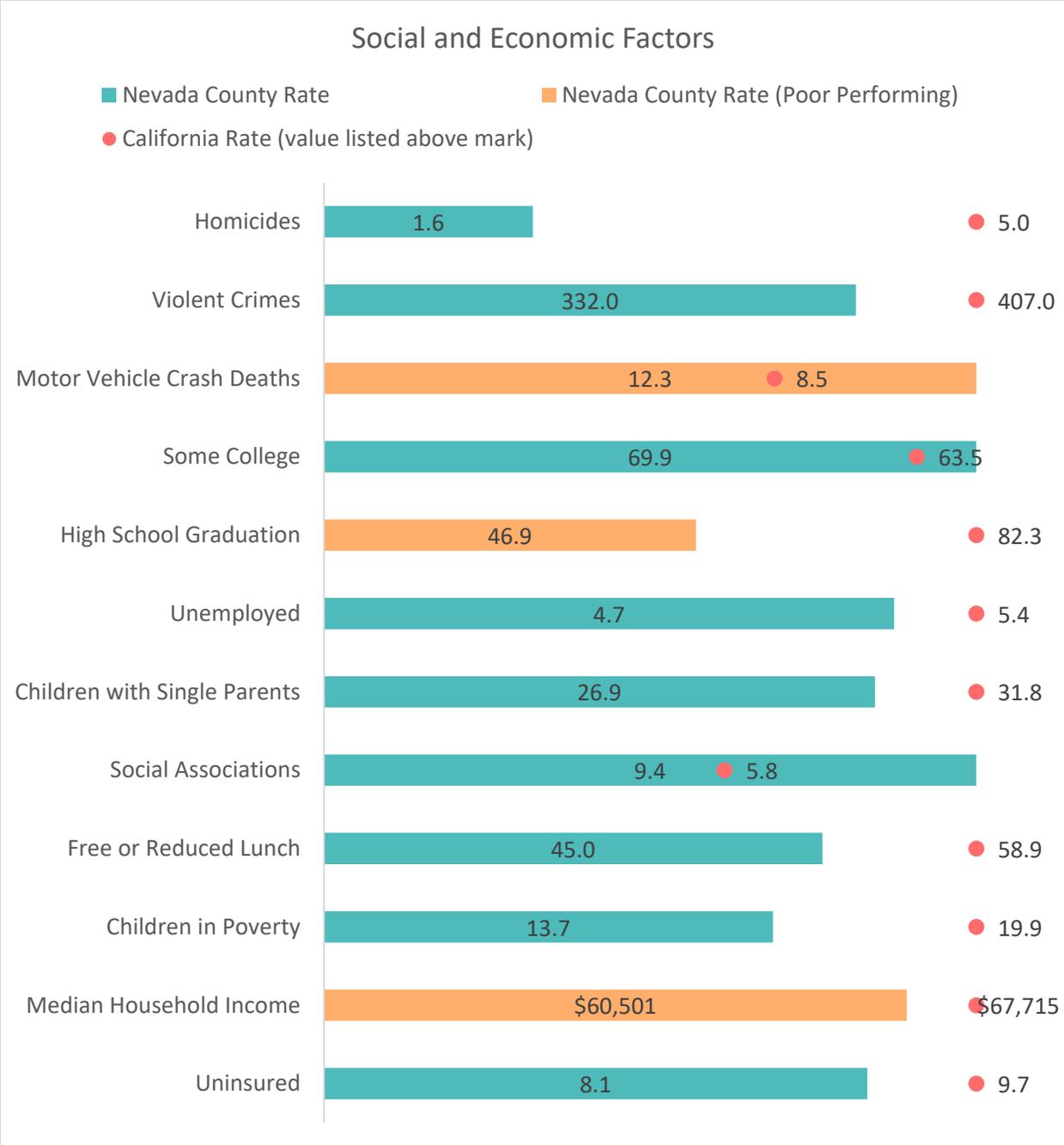| Factor	Nevada County Rate	Nevada County Rate (Poor Performing)	California Rate
Homicides	1.6		5.0
Violent Crimes	332.0		407.0
Motor Vehicle Crash Deaths		12.3	8.5
Some College	69.9		63.5
High School Graduation		46.9	82.3
Unemployed	4.7		5.4
Children with Single Parents	26.9		31.8
Social Associations	9.4		5.8
Free or Reduced Lunch	45.0		58.9
Children in Poverty	13.7		19.9
Median Household Income		$60,501	$67,715
Uninsured	8.1		9.7

Figure 11: Social and economic factors compared to state benchmarks

Physical Environment

Table 12: Physical Environment Indicators Compared to State Benchmarks

| Indicators	Description	Nevada County	California
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	22.69%	27.88%
Homelessness	Homeless persons per 100,000 – rate	272.51	339.25
Housing Units with No Vehicle	Percentage of households with no vehicle available	4.60%	7.60%
Public Transit Proximity	Percentage of population living in a Census block within a quarter of a mile to a fixed transit stop	47.64%	50.00%
Pollution Burden	Percentage of population living in a Census tract with a CalEnviroscreen Pollution Burden score greater than the 50th percentile for the state	12.92%	50.44%
Air Particulate Matter	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	6.70	8.00
Drinking Water Violations	Reports whether or not there was a health-related drinking water violation in a community within the county	Yes	
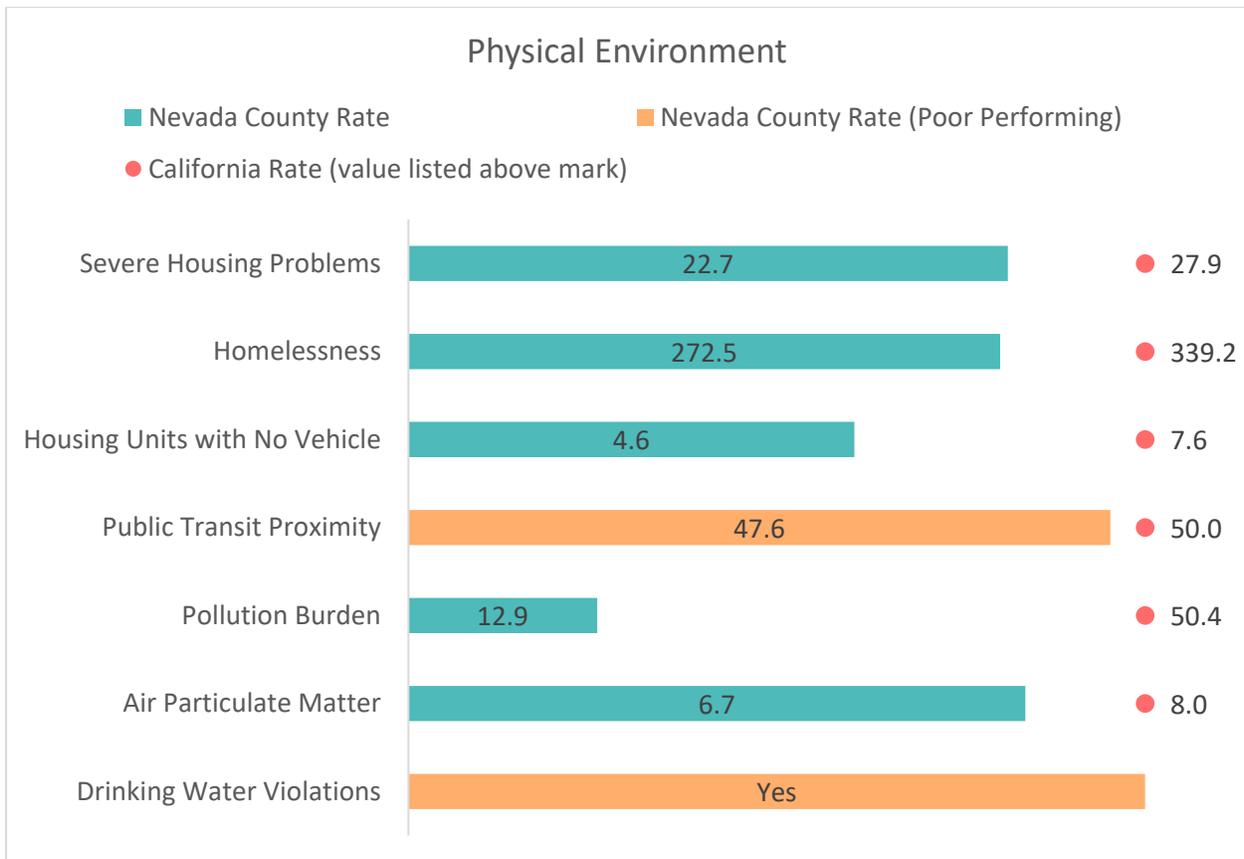
Figure 12: Physical environment indicators compared to state benchmarks

Primary Data Collection

Key Informant Interviews and Focus Group Results

Integrating community input in the assessment was a top priority. Collaborative members worked to embed data from key informants and community members in multiple parts of the assessment, in addition to allowing this data to be a main components of health need identification and the sole data for prioritization. Results from all key informant interviews and focus groups are presented throughout the main report and technical section including:

- Word cloud of the results from the 2019 assessment interviews in response to the question: What are the biggest health needs in the community? (Figure 1)
- Identification and prioritization of significant health needs
- Identification of populations and locations experiencing health disparities
- Significant health need descriptions
- Identification of resources to address significant health needs

Community Health Assessment Survey Results

The results of the Community Health Assessment Survey administered by NCDPH in July and August of 2018 are displayed by survey question in Tables 13 and 14 and in Appendix C. Survey results on key questions are presented in Table 13 for the entire Nevada County area and compared to results from the Community Health Assessment Survey conducted by NCDPH in 2014-2015 for benchmark comparison. Table 14 contains results from participants that reside in all of Nevada County as well as data provided by Tahoe Forest Hospital Survey containing results specific to the eastern area of the county (town of Truckee). This data in Table 14 and compared to Behavioral Risk Factor Surveillance System (BRFSS) survey data for 2017 (note that a few state rates are provided from 2015 and 2016) for the state of California.

Table 13: NCDPH Community Health Assessment Survey 2018 Countywide Responses for Key Questions Compared to 2014-2015 benchmarks

q40: What do you think are the three biggest health problems in your community?	2018 Community Health Assessment Survey Nevada Countywide Results (Top 5)	2014-2015 Community Health Assessment Survey Nevada County Results (Top 5)
	Housing that is adequate, safe and affordable (16.6%)	Good jobs and health economy (55.6%)
	Mental health problems (16.1%)	Access to healthcare (46.3%)
	Access to healthcare (10.2%)	Affordable housing (39.9%)
	Aging problems (arthritis, hearing loss, etc.) (9%)	Healthy Behaviors and lifestyles (30.8%)
	Poverty (7.3%)	Low crime/safe neighborhoods (22.7%)

q41: How heathy would you rate your community? (Q41)	25.7% of respondents rated the community "healthy"	47% of respondents rated the community "healthy"
q44: My community is a good place to raise children (Q44)	58.8% of respondents agreed that the community is a good place to raise children	73% of respondents agreed that the community is a good place to raise children
q48: What do you think are the three most important factors for quality of life in a "healthy community"?	Affordable housing (60.5%)	Good jobs and health economy (56%)
	Access to healthcare (53.75%)	Access to healthcare (46%)
	Good jobs and health economy (39.25%)	Affordable housing (40%)
	Healthy behaviors and lifestyle (20.5%)	Healthy behaviors and lifestyle (31%)

Table 14: Community Health Assessment Survey Results by Question - NV County Survey, Tahoe Forest Survey, compared to BRFSS

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
q2: Would you say that in general your health is:	Excellent	46	11.20%	Excellent	72	31.70%	Excellent	1942	20.8%
	Very Good	164	39.90%	Very Good	99	43.60%	Very Good	3017	32.2%
	Good	131	31.90%	Good	44	19.40%	Good	2835	30.3%
	Fair	57	13.90%	Fair	9	4%	Fair	1173	12.5%
	Poor	13	3.20%	Poor	3	1.30%	Poor	380	4.1%
q3: Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?	None	205	49.90%	None	149	65.60%	None	6003	64.1%
	1 or more	188	45.70%	1 or more	74	32.60%	1 or more	3276	35.0%
	Don't know, not sure	18	4.40%	Don't know, not sure	4	1.80%			

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[15] Survey questions q28, q29, and q38 are from the BRFSS CA Statewide 2016 survey: q37 is from BRFSS 2015

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
q4: Now thinking about your mental health, which includes stress, depression, and problems with emotions or how many days during the past 30 days was your mental health NOT good?	None	181	100%	None	158	69.90%	None	3268	34.9%
	1 or more	0	0%	1 or more	67	29.60%	1 or more	5999	64.1%
	Don't know, not sure	0	0%	Don't know, not sure	1	0.40%			
q5: Do you have any kind of health care coverage, including health insurance from an employer or private, prepaid plans such as HMOs, or government plans such as Medicare, MediCal, or CHIP?	Yes	383	93.20%	Yes	220	96.90%			
q6: Do you have ONE person you think of as your personal doctor or health care provider?	Yes, only one	199	48.70%	Yes, only one	122	53.70%			
	Yes, more than one	139	34%	Yes, more than one	57	25.10%			
	No personal doctor	71	17.40%	No personal doctor	48	21.10%			
q7: Which of the following BEST describes your relationship with your physician and your health care use:	I have a chronic health conditional and require frequent care	83	20.10%	I have a chronic health condition and require frequent care	19	8.40%			

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
	I use health care mostly for preventive checkups and health monitoring	204	49.50%	I use health care mostly for preventive checkups and health monitoring	123	54.70%			
	I seek out health care ONLY when I'm sick or injured	110	26.70%	I seek out health care ONLY when I'm sick or injured	63	28%			
	I never use the health care system	6	1.50%	I never use the health care system	3	1.30%			
q9: Has a lack of transportation kept you from getting to a doctor's office or to any other health care appointment during the PAST YEAR?	Yes	38	9.40%	Yes	9	4%			
q10: During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?	Yes	326	79.70%	Yes	214	94.30%			

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
q11: Have you ever been told by a doctor that you have diabetes?	Yes	35	8.60%	Yes	12	5.30%			
q12: Has a doctor, nurse, or other health professional EVER told you that you had...	A heart attack, also called a myocardial infarction? (Yes)	27	6.62%	A heart attack, also called a myocardial infarction? (Yes)	7	3.08%			
	Angina or coronary heart disease? (Yes)	26	6.37%	Angina or coronary heart disease? (Yes)	13	5.73%			
	A stroke? (Yes)	15	3.77%	A stroke? (Yes)	9	3.96%			
	Chronic obstructive pulmonary disease, emphysema, or chronic bronchitis? (Yes)	33	8.25%	Chronic obstructive pulmonary disease, emphysema, or chronic bronchitis? (Yes)	6	2.64%			
q13: Has a doctor, nurse or other health professional EVER told you that your blood cholesterol is high?	Yes	147	36.10%	Yes	80	38.60%			

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
q14: Has a doctor, nurse, or other health professional EVER told you that you had high blood pressure?	Yes	138	34%	Yes	60	26.40%	Yes	6487	69.3%
q15: How long has it been since you last visited a dentist or a dental clinic for any reason?	Within the past year (anytime less than 12 months ago)	275	67.10%	Within the past year (anytime less than 12 months ago)	191	84.10%			
	Within the past 2 years (1 year ago but less than 2 years ago)	53	12.90%	Within the past 2 years (1 year ago but less than 2 years ago)	27	11.90%			
	Within the past 5 years (2 years ago but less than 5 years ago)	39	9.50%	Within the past 5 years (2 years ago but less than 5 years ago)	6	2.60%			
	5 or more years ago	42	10.20%	5 or more years ago	1	0.40%			
	Never	1	0.20%	Never	1	0.40%			
q17: Do you have asthma?	Yes	49	12%	Yes	35	15.40%	Yes	811	8.7%

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
q18: Do you now smoke cigarettes every day, some days or not at all?	Every day	29	7.10%	Every day	4	5.40%	Every day	565	6.0%
	Some days	20	4.90%	Some days	2	2.70%	Some days	389	4.2%
	Not at all	357	87.90%	Not at all	68	91.90%	Not at all	2121	22.7%
q19L Do you currently use chewing tobacco, snuff, or snus every day, some days or not at all?	Every day	4	1%	Every day	1	0.40%	Every day	64	0.7%
	Some days	3	0.70%				Some days	68	0.7%
	Not at all	403	98.30%	Not at all	226	99.60%	Not at all	8596	91.9%
q20: Electronic Cigarettes, or e-cigarettes as they are often called, are battery-operated devices that simulate smoking a cigarette, but do not involve the burning of tobacco. The heated vapor produced by an e-cigarette often contains nicotine. Have you ever used an electronic cigarette, even just one time in your life?	Yes	41	10.10%	Yes	8	3.50%	Yes	1507	16.1%
q21: Do you now use electronic cigarettes every day, some days, or not at all?	Every day	4	1%	Some days	1	12.50%	Every day	100	6.6%
	Some days	4	1%				Some days	168	11.2%
	Not at all	402	98%	Not at all	7	87.50%	Not at all	1234	82.0%
q22*: During the past 30 days, how many DAYS per WEEK did you have at least one drink of any alcoholic beverage? Please fill in number of days.	0 days	184	45%	0 days	0	0%	0 days	3504	40.8%
	1 day	68	16.60%	1 day	17	17.20%	1 day	430	5.0%
	2 days	42	10.30%	2 days	18	18.20%	2 days	354	4.1%
	3 days	35	8.60%	3 days	19	19.20%	3 days	269	3.1%
	4 days	13	3.20%	4 days	17	17.20%	4 days	139	1.6%
	5 days	24	5.90%	5 days	18	18.20%	5 days	130	1.5%
	6 days	15	3.70%	6 days	10	10.10%	6 days	32	0.4%

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
	7 days	28	6.80%	7 days	0	0%	7 days	166	1.9%
q23*: During the past 30 days, how many DAYS per MONTH did you have at least one drink of any alcoholic beverage?	None	161	39.20%	None	0	0%	None	3504	40.8%
	1-3 days	87	21.20%	1-3 days	18	38.30%	1-3 days	1672	19.5%
	4-6 days	32	7.80%	4-6 days	9	19.10%	4-6 days	649	7.6%
	7-9 days	29	7.10%	7-9 days	2	4.30%	7-9 days	173	2.0%
	10-15 days	33	8%	10-15 days	9	19.10%	10-15 days	437	5.1%
	16-20 days	19	4.60%	16-20 days	4	8.50%	16-20 days	175	2.0%
	21-25 days	22	5.40%	21-25 days	4	8.50%	21-25 days	91	1.1%
	26 or more days	28	6.80%	26 or more days	1	2.10%	26 or more days	370	4.3%
q24: Considering all types of alcoholic beverages, how many times during the past 30 days did you have FIVE for men, FOUR for women or more drinks on an occasion?	0-1 times	361	88.30%	0-1 times	147	83.10%	0-1 times	4112	82.2%
	2-4 times	29	7.10%	2-4 times	24	13.60%	2-4 times	574	11.5%
	5 or more times	19	4.60%	5 or more times	6	3.40%	5 or more times	317	6.3%
q25: The next two questions are about marijuana (aka cannabis, pot, grass, weed, etc.) and hashish. Marijuana is usually smoked or it is sometimes cooked in food. Hashish is a form of marijuana that is also called "hash". It is usually smoked in a pipe. Another form of hashish is hash oil. Have you ever, even once, used marijuana or hashish?	Yes	247	61%	Yes	151	66.50%			

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
q26: Think specifically about the past 30 days, from today up to and including today. During the past 30 days, on how many days did you use marijuana or hashish?	None	315	77.80%	None	119	78.80%	None	5718	87.1%
	1-3 days	25	6.20%	1-3 days	11	7.30%	1-3 days	229	3.5%
	4-6 days	12	3%	4-6 days	6	4%	4-6 days	117	1.8%
	7-9 days	9	2.20%	7-9 days	0	0%	7-9 days	24	0.4%
	10-15 days	9	2.20%	10-15 days	6	4%	10-15 days	106	1.6%
	16-20 days	8	2%	16-20 days	3	2%	16-20 days	68	1.0%
	21-25 days	6	1.50%	21-25 days	2	1.30%	21-25 days	27	0.4%
	26 or more days	21	5.20%	26 or more days	4	2.60%	26 or more days	276	4.2%
q27: A flu shot is an influenza vaccine injected into your arm. During the past 12 months, have you had a seasonal flu shot?	Yes	227	57.60%	Yes	139	61.20%	Yes	35.7	42.0%
q28*[16]:Females only - A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?	Yes	267	86.70%	Yes	141	97.90%		4807	81.3%
q29[1]: Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. Have you ever had either of these exams?	Yes	214	52.80%	Yes	135	84.90%	Yes	3523	60.7%

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[16] 2016

Survey Question		Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
		Response	Count	%	Response	Count	%	Response	Count	%
q30: Have you EVER been told by a doctor, nurse, or other health professional you had cancer?		Yes	73	18%	Yes	30	13.30%	Yes	1494	15.9%
q31: Over the last 2 weeks, how many days have you…										
	Had little interest or pleasure doing things?	1-3 days	104	26.00%	1-3 days	47	20.70%			
		10-12 days	10	2.50%	10-12 days	0	0.00%			
		13-14 days	12	3.00%	13-14 days	6	2.64%			
		4-6 days	29	7.25%	4-6 days	8	3.52%			
		7-9 days	16	4.00%	7-9 days	5	2.20%			
	Felt down, depressed or hopeless?	1-3 days	108	26.93%	1-3 days	39	17.18%			
		10-12 days	12	2.99%	10-12 days	1	0.44%			
		13-14 days	16	3.99%	13-14 days	0	0.00%			
		4-6 days	29	7.23%	4-6 days	7	3.08%			
		7-9 days	13	3.24%	7-9 days	6	2.64%			
	Had trouble falling asleep or staying asleep or sleeping too much?	1-3 days	122	30.35%	1-3 days	61	26.87%			
		10-12 days	25	6.22%	10-12 days	11	4.85%			
		13-14 days	52	12.94%	13-14 days	10	4.41%			
		4-6 days	42	10.45%	4-6 days	27	11.89%			
		7-9 days	29	7.21%	7-9 days	17	7.49%			
	Felt tired or had little energy?	1-3 days	158	39.60%	1-3 days	81	35.68%			
		10-12 days	30	7.52%	10-12 days	9	3.96%			
		13-14 days	41	10.28%	13-14 days	11	4.85%			
		4-6 days	53	13.28%	4-6 days	23	10.13%			
		7-9 days	39	9.77%	7-9 days	12	5.29%			
		1-3 days	70	17.33%	1-3 days	29	12.78%			
		10-12 days	11	2.72%	10-12 days	1	0.44%			

Survey Question		Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
		Response	Count	%	Response	Count	%	Response	Count	%
	Felt bad about yourself or that you were a failure or had let yourself or your family down?	13-14 days	21	5.20%	13-14 days	6	2.64%			
		4-6 days	23	5.69%	4-6 days	6	2.64%			
		7-9 days	11	2.72%	7-9 days	4	1.76%			
q32: Has a doctor or other healthcare provider EVER told you that you have: An anxiety disorder (including acute stress disorder, anxiety, generalized anxiety disorder, OCD, panic disorder, phobia, PTSD, or social anxiety disorder)?		Yes	101	25%	Yes	21	9.30%			
q33L Has a doctor or other healthcare provider EVER told you that you have: A depressive disorder (including depression, major depression, dysthymia, or minor depression		Yes	109	26.80%	Yes	28	12.40%	Yes	1793	19.2
q34L During the past 12 months, have you received any treatment or counseling for any problem you were having with your emotions, nerves or mental health? Please do not include treatment for alcohol or drug use.		Yes	86	21.30%	Yes	17	45.90%			
q35: Not counting carrots, potatoes, or salad, how many SERVINGS of VEGETABLES did you eat during the PAST WEEK?		None	6	1.50%	None	0	0%			
		1-2 times	52	12.80%	1-2 times	16	7.20%			
		3-4 times	77	19%	3-4 times	21	9.40%			
		5-7 times	133	32.80%	5-7 times	65	29.10%			

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
Example: a serving of vegetables at both lunch and dinner would be two servings.	8 or more servings	137	33.70%	8 or more servings	117	52.50%			
q36: Does the COST keep you from eating more vegetables?	Yes	70	17.33%	Yes	10	4.41%			
q36: Does NOT HAVING TIME TO COOK keep you from eating more vegetables?	Yes	101	25.38%	Yes	54	23.79%			
q36: Does NOT KNOWING HOW TO PREPARE THEM keep you from eating more vegetables?	Yes	46	11.68%	Yes	9	3.96%			
q37: How many days in the past WEEK did you purchase or receive food from…									
A Senior Center or Food Pantry?	1 day	26	6.47%	1 day	4	1.76%			
	2 days	1	0.25%	2 days	0	0.00%			
	3 days	0	0.00%	3 days	1	0.44%			
	4 days	4	1.00%	4 days	0	0.00%			
	5 or more days	23	5.72%	5 or more days	2	0.88%			
A Wal Mart, Target, Kmart or other big box store?	1 day	43	10.72%	1 day	35	15.42%			
	2 days	14	3.49%	2 days	4	1.76%			
	3 days	7	1.75%	3 days	2	0.88%			
	4 days	3	0.75%	4 days	1	0.44%			
	5 or more days	4	1.00%	5 or more days	2	0.88%			
A convenience store or corner store?	1 day	37	9.39%	1 day	17	7.49%			
	2 days	22	5.58%	2 days	1	0.44%			
	3 days	8	2.03%	3 days	2	0.88%			

Survey Question		Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
		Response	Count	%	Response	Count	%	Response	Count	%
		4 days	2	0.51%	4 days	2	0.88%			
		5 or more days	4	1.02%	5 or more days	2	0.88%			
	A Farmer's Market?	1 day	121	30.79%	1 day	63	27.75%			
		2 days	15	3.82%	2 days	11	4.85%			
		3 days	14	3.56%	3 days	3	1.32%			
		4 days	0	0.00%	4 days	0	0.00%			
		5 or more days	7	1.78%	5 or more days	4	1.76%			
	A grocery store such as (examples varied between surveys)?	1 day	116	28.86%	1 day	68	29.96%			
		2 days	100	24.88%	2 days	57	25.11%			
		3 days	64	15.92%	3 days	37	16.30%			
		4 days	33	8.21%	4 days	15	6.61%			
		5 or more days	68	16.92%	5 or more days	28	12.33%			
	A fast food or chain restaurant?[17]	1 day	121	30.48%	1 day	41	18.06%			
		2 days	40	10.08%	2 days	14	6.17%			
		3 days	21	5.29%	3 days	10	4.41%			
		4 days	8	2.02%	4 days	1	0.44%			
		5 or more days	9	2.27%	5 or more days	1	0.44%			

[17] 2015

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
q38[1]: Some people play the role of caregiver as part of their daily lives, which means they are responsible for meeting the physical and psychological needs of others. Do you act as a caregiver for another ADULT, such as spouse, sibling, aunt, uncle, parent or grandparent?	Yes	76	18.90%	Yes	24	10.60%	Yes	484	14.2%
q39: Do you have…	A living will? (Yes)	132	32.92%	A living will or not? (Yes)	120	52.86%			
	An advanced directive related to healthcare treatment or not? (Yes)	164	41.62%	An advanced directive related to health care treatment, or not? (Yes)	127	55.95%			
	A power of attorney? (Yes)	119	29.82%	A power of attorney or not? (Yes)	111	48.90%			
	A health care proxy? (Yes)	109	27.88%	A health care proxy or not? (Yes)	92	40.53%			

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
q50: Have any language, cultural barriers, or your immigration status kept you from seeking medical care in the past year?	Yes	3	0.80%	Yes	0	0%			
q51: What is the highest education level you completed?	Less than 9th grade	3	0.80%				Less than 9th grade	554	6.7%
	9th to 12th grade, no diploma	10	2.50%				9th to 12th grade, no diploma	516	6.3%
	High school graduate (includes equivalency)	42	10.50%				High school graduate (includes equivalency)	1545	18.8%
	Some college, no degree	111	27.80%				Some college, no degree	1877	22.8%
	Associate's degree	44	11%						
	Bachelor's degree	84	21.10%						
							College graduate	2052	24.9%
	Graduate or professional degree	105	26.30%				Graduate or professional degree	1453	17.7%
q52: Are you currently:	Employed for wages	206	51.80%				Employed for wages	4289	45.8%

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
	Self employed	33	8.30%				Self employed	962	10.3%
	Out of work for MORE than one year	1	0.30%				Out of work for MORE than one year	246	2.6%
	Out of work for LESS than one year	7	1.80%				Out of work for LESS than one year	292	3.1%
	A homemaker (stay at home parent/guardian)	9	2.30%				A homemaker (stay at home parent/guardian)	612	6.5%
	A student	6	1.50%				A student	462	4.9%
	Retired	111	27.90%				Retired	1883	20.1%
	Unable to work	25	6.30%				Unable to work	547	5.8%
q53: Annual income…	Under $10,000	32	8.10%				Under $10,000	598	8.5%
	$10,000-25,000	89	22.50%				$10,000-25,000	1367	19.4%
	$26,000-35,000	58	14.60%				$26,000-35,000	627	8.9%
	$36,000-50,000	51	12.90%				$36,000-50,000	743	10.5%

Survey Question	Community Health Assessment Survey (2018) Nevada County (Western County) rates			Tahoe Forest Hospital Survey (2017) (Eastern County)			Behavioral Risk Factor Surveillance System survey (BRFSS, 2017)[15] California State rates		
	Response	Count	%	Response	Count	%	Response	Count	%
	$51,000-75,000	68	17.20%				$51,000-75,000	937	13.3%
	$76,000-100,000	37	9.30%				$76,000-100,000	798	11.3%
	Over $100,000	43	10.90%				Over $100,000	1979	28.1%

CHNA/CHA Methods and Processes

Two related models were foundational in this CHNA/CHA. The first is a conceptual model that expresses the theoretical understanding of community health used in the analysis. This understanding is important because it provides the framework underpinning the collection of primary and secondary data. It is the tool used to ensure that the results are based on a rigorous understanding of those factors that influence the health of a community. The second model is a process model that describes the various stages of the analysis. It is the tool that ensures that the resulting analysis is based on a tight integration of community voice and secondary data and that the analysis meets both federal regulations for conducting hospital CHNAs and the requirement for conducting CHAs under PHAB.

Conceptual Model

The conceptual model used in this needs assessment is shown in Figure 13. This model organizes populations' individual health-related characteristics in terms of how they relate to up- or downstream health and health-disparities factors. In this model, health outcomes (quality and length of life) are understood to result from the influence of health factors describing interrelated individual, environmental, and community characteristics, which in turn are influenced by underlying policies and programs.

This model was used to guide the selection of secondary indicators in this analysis as well as to express in general how these upstream health factors lead to the downstream health outcomes. It also suggests that poor health outcomes within Nevada County can be improved through policies and programs that address the health factors contributing to them. This conceptual model is a slightly modified version of the County Health Rankings Model used by the Robert Wood Johnson Foundation. It was altered by adding a "Demographics" category to the "Social and Economic Factors" in recognition of the influence of demographic characteristics on health outcomes.

To generate the list of secondary indicators used in the assessment, all partners reviewed each conceptual model category and discussed potential indicators that could be used or that were important to each partner in order to fully represent the category. The results of this discussion were then used to guide secondary data collection.
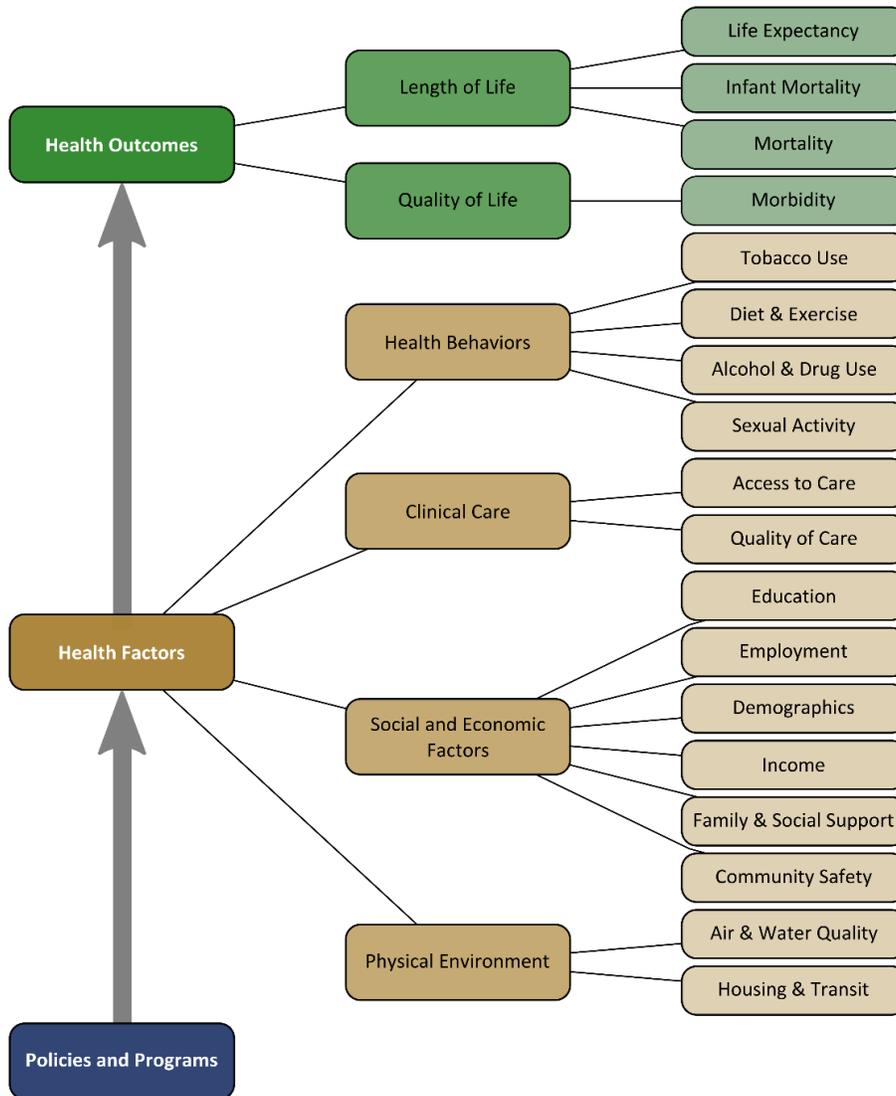
Figure 13: Community Health Assessment Conceptual Model as modified from the County Health Rankings Model, Robert Wood Johnson Foundation, and University of Wisconsin, 2015

Process Model

Figure 14 outlines the data collection and stages of this analysis. The project began by confirming the geographic area agreed to by the partners. SNMH representatives and NCPHD representatives agreed to share CHNA/CHA work for the SNMH service area, with the addition of the eastern portion of the county to be added to the Nevada County CHNA/CHA report.

Primary data collection included both key informant and focus-group interviews with community health experts and residents, as well as a community survey spanning the county area. Secondary data, including the health-factor and health-outcome indicators identified using the conceptual model and the Community Health Vulnerability Index (CHVI) values for each census tract within the county, were used to identify areas or population subgroups within the county experiencing health disparities.
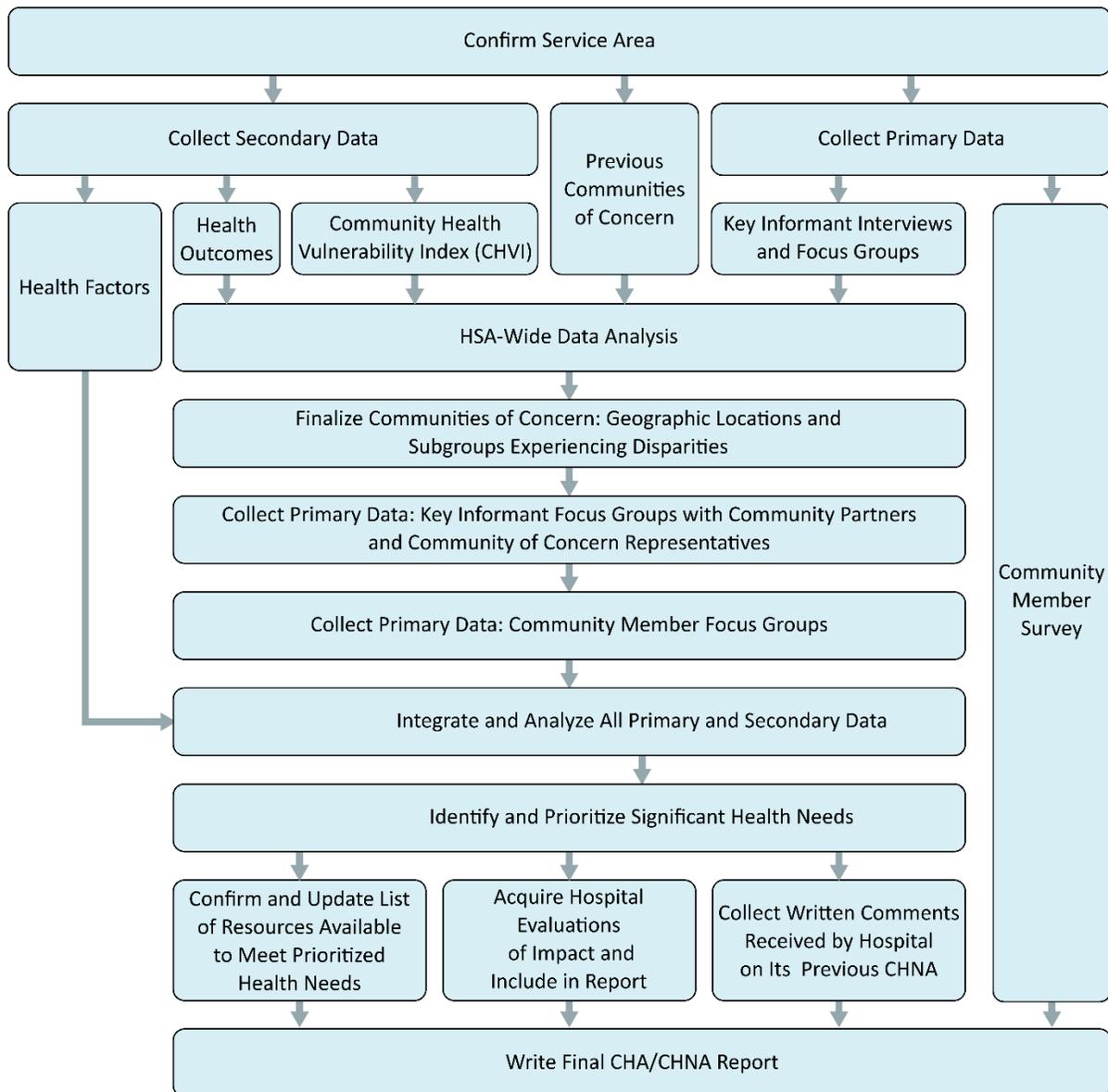
Figure 14: CHNA/CHA process model

Overall primary and secondary data were integrated to identify significant health needs for Nevada County. Significant health needs were then prioritized based on analysis of the primary data. Finally, information was collected regarding the resources available within the community to meet the identified health needs. For the hospital partners, an evaluation of the impact of the hospital's prior efforts was obtained from hospital representatives and written comments on the previous CHNA were gathered and included in the report.

Greater detail on the collection and processing of the secondary and primary data is given in the next two sections. This is followed by a more detailed description of the methodology utilized during the main analytical stages of the process.

Primary Data Collection and Processing

Primary Data Collection

Input from the community in Nevada County was collected through three main mechanisms. First, key Informant interviews were conducted with community health experts and area service providers (i.e., members of social-service nonprofit organizations and related healthcare organizations). These interviews occurred in both one-on-one and in group interview settings. Second, focus groups were conducted with community residents living in identified Communities of Concern or representing communities experiencing health disparities. Third, a countywide survey was administered with community residents.

For key informant interviews and focus groups, all participants were given an informed consent form prior to their participation, which provided information about the project, asked for permission to record the interview, and listed the potential benefits and risks of involvement in the interview. All interview data were collected through note-taking.

Key Informant Results

Primary data collection with key informants included two phases. Phase one began by interviewing area-wide service providers with knowledge of the Nevada County region, including input from the designated public health department. Data from these area-wide informants, coupled with sociodemographic data, were used to identify additional key informants for the assessment that were included in phase two.

As a part of the interview process, all key informants were asked to identify vulnerable populations both geographically and demographically. The interviewer asked each participant to verbally explain what vulnerable populations existed in the county. As needed, for a visual aid, key informants were provided a map of the county to directly point to the geographically locations of these vulnerable communities. Results of this are presented in Figure 3 and Table 2. Additional key informant interviews were focused on the geographic locations and subgroups identified.

Table 15 contains a listing of community health experts, or key informants, that contributed input to the CHNA/CHA. The table describes the name of the represented organization, the number of participants, area of expertise and organization, populations served by the organization, and the date of the interview. The instrument used, Key Informant Interview Guide, is contained in Appendix A.

Table 15: Key Informant Sample for Nevada County

Organization	# of participants	Area of Expertise	Population(s) Served	Date
Nevada County Public Health Department	3	Public health	All Nevada county residents	6.11.18
Sierra Nevada Memorial Hospital	10	Clinical Staff with included: Nursing Director, Patient Registration, ER Patient	All residents of the SNMH service area; low-income; under-and un-insured	6.28.18

Organization	# of participants	Area of Expertise	Population(s) Served	Date
		Navigator, Ambulance Service; Clinical Social Worker; Hospital administration of various departments		
Chapa-De Indian Health	1	Indian Health Services - Clinic administration	Residents of Nevada County; Native Indian county residents; low-income; under- and un-insured	6.29.11
Western Sierra Medical Clinic	1	Community Clinic - FQHC	Residents of Nevada County; Low-income; under- and un-insured	7.10.18
Sierra Clinic	1	Community Clinic - FQHC	Residents of Nevada County; Low-income; under- and un-insured	7.10.18
County Service Providers – Hospitality House; Community Recovery Resources; New Events and Opportunities; Helping Hands; Hospice of the Foothills; Child Advocates	6	County service providers – Dignity grantees	Residents of Nevada County; Low-income; under- and un-insured; Youth/young adults; Aging residents	5.24.18

Organization	# of participants	Area of Expertise	Population(s) Served	Date
Nevada County Health Collaborative - County Public Health; County Behavioral Health; Sierra Nevada Memorial Hospital Community Benefit Staff; Connecting Point; County Social Services – Adult Protective Services; ChapaDe Indian Health Services; Sierra Family Medical Clinic; NAMI; FREED (Center for Independent Living)	9	Community health; Public health; community mental health/behavioral health	Residents of Nevada County; Low-income; under- and un-insured; Youth/young adults; Aging residents; Native Indian county residents; community residents experiencing substance abuse; community residents experiencing mental illness;	7.3.18
Community Collaborative Tahoe Truckee Community Health Foundation	1	Health foundation director; Service provider	Community members of the Truckee and eastern portion of the county	7.31.18

Focus Group Results

Focus group interviews were conducted with community members living in geographic areas of the service area identified as locations or populations experiencing a disparate amount of poor socioeconomic conditions and poor health outcomes, or, Communities of Concern. Recruitment consisted of referrals from designated service providers representing vulnerable populations, as well as direct outreach to special population groups.

Table 16 contains a listing of community resident groups that contributed input to the CHNA/CHA. The table describes the location of the focus group, the date it occurred, the total number of participants, and demographic information for focus group members. In addition, focus group data collected as part of a

2017 Community Health Assessment by Tahoe Forest Hospital[18] was also added to this assessment to assure that the needs of the Truckee area of Nevada County was included.

Table 16: Focus Group List for Nevada County

Location	Date	# of participants	Demographic Information
Grass Valley Family Resource Center	8.8.18	2	Community members in the Grass Valley area; low-income; families with young children
North San Juan Family Resource Center	8.29.18	5	Community residents of the North San Juan Ridge; Aging population; families with young children;
Connecting Point	9.10.18	8	Community residents of Nevada County; low-income; unemployed; under-and un-insured
Data provided by Tahoe Forest Hospital[16]			
Truckee	November – December 2017	5	Residents of the Truckee area; Young adults (18-24)
Truckee	November – December 2017	4	Residents of the Truckee area; Homeless

Community Health Assessment Survey

The NCPHD conducted a community health survey during Summer 2018 (July 24-September 1, 2018). Residents throughout the county completed the survey (412 responses), however most of the respondents resided in Western Nevada County. The Community Health Survey was developed using questions from a 2014-2015 Community Health Survey in addition to the Tahoe Forest Community Health Needs Assessment in conjunction with the SNMH-Dignity Staff.

Significant community outreach efforts were made to distribute the survey countywide. NCPHD staff worked with a variety of Chamber of Commerce's, Family Resource Centers, local healthcare coalitions and facilities, local nonprofits, Nevada County staff, Non-Governmental Organizations, and Women Infant and Children program to distribute survey. Direct interview collection methods were conducted to obtain survey results at the Back to School immunization clinic, grocery stores, the Madelyn Helling Library, and the Nevada County Fair by UC Davis nursing students. At the completion of the survey respondents were able to complete an entry to be entered into a drawing for gift cards. Individuals were randomly selected to receive the gift cards after every 50 surveys were completed. The Community Health Assessment Survey was anonymous with no personal information identifying respondents.

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[18] Through a data agreement between CHI and Tahoe Forest Hospital (TFH) focus group data from a 2017 CHNA assessment was acquired and added to the sample for this CHNA/CHA work. TFH provided the partnership with focus group data for two focus groups conducted in the Truckee area. The entire TFH assessment can be found here: https://www.tfhd.com/sites/default/files/2018%20TFHS%20CHNA%20report%20FINAL.pdf

The survey instrument is contained in Appendix A of this report. Figure 15 displays the racial/ethnic profile of the survey respondents in comparison to census counts for the county.
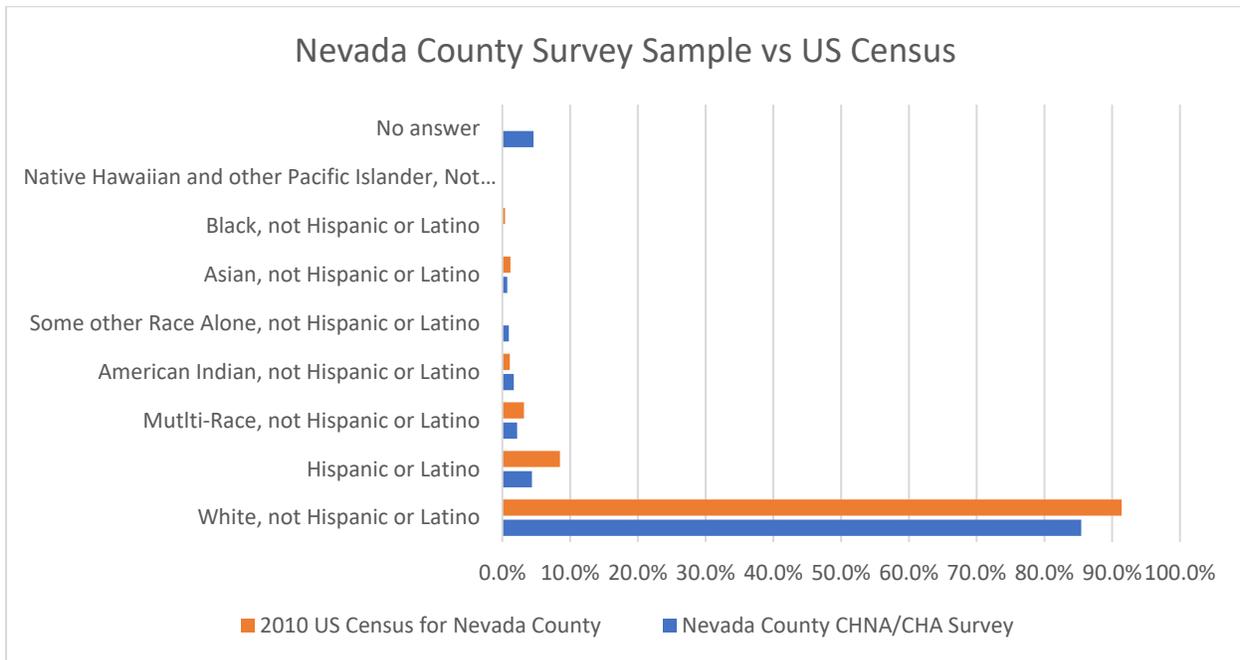
Figure 15: Survey of race/ethnicity profile for Nevada County vs. U.S. Census profile for Nevada County (U.S. Census Bureau)

Primary Data Processing

Data were analyzed using NVivo 11 qualitative software. Key informants were also asked to write data directly onto a map of Nevada County for identification of populations and locations experiencing health disparities in the county. Content analysis included thematic coding to potential health need categories, the identification of special populations experiencing health issues, and the identification of resources. In some instances, data were coded in accordance with the interview question guide. Results were aggregated to inform the determination of prioritized significant health needs.

Survey data from the NCDPH Community Health Assessment Survey were aggregated and examined by survey question and compared to benchmarks for interpretation. For some key questions results were compared to previous NCDPH survey findings from 2014-2015. The remainder of the data, which included NCDPH 2018 survey results and Tahoe Forest Survey results, was compared by question to the Behavioral Risk Factor Surveillance System survey data from 2017 for the state of California.

Secondary Data Collection and Processing

The secondary data used in the analysis can be thought of as falling into four categories. The first three are associated with the various stages outlined in the process model. These include 1) health-outcome indicators, 2) Community Health Vulnerability Index (CHVI) data used to identify areas and population subgroups experiencing disparities, and 3) health-factor and health-outcome indicators used to identify significant health needs. The fourth category of indicators is used to help describe the socioeconomic and demographic characteristics of Nevada County.

Mortality data at the ZIP Code level from the California Department of Public Health (CDPH) was used to represent health outcomes. U.S. Census Bureau data collected at the tract level was used to create the CHVI. Countywide indicators representing the concepts identified in the conceptual model and collected from multiple data sources were used in the identification of significant health needs. In the fourth category, U.S. Census Bureau data were collected at the state, county, and ZIP Code Tabulation Areas (ZCTA) levels and used to describe general socioeconomic and demographic characteristics in the county. This section details the sources and processing steps applied to the CDPH health-outcome data; the U.S. Census Bureau data used to create the CHVI; the countywide indicators used to identify significant health needs; and the sources for the socioeconomic and demographic variables obtained from the U.S. Census Bureau.

CDPH Health-Outcome Data

Mortality and birth-related data for each ZIP Code within the county were collected from the California Department of Public Health (CDPH). The specific indicators used are listed in Table 17. To increase the stability of calculated rates, each of these indicators were collected for the years from 2012 to 2016. The specific processing steps used to derive these rates are described below.

Table 17: Mortality and Birth-Related Indicators Used in the CHNA/CHA

Indicator	ICD10 Codes
Heart Disease Mortality	I00-I09, I11, I13, I20-I51
Malignant Neoplasms (Cancer) Mortality	C00-C97
Cerebrovascular Disease (Stroke) Mortality	I60-I69
Chronic Lower Respiratory Disease (CLD) Mortality	J40-J47
Alzheimer's Disease Mortality	G30
Unintentional Injuries (Accidents) Mortality	V01-X59, Y85-Y86
Diabetes Mellitus Mortality	E10-E14
Influenza and Pneumonia Mortality	J09-J18
Chronic Liver Disease and Cirrhosis Mortality	K70, K73, K74
Essential Hypertension and Hypertensive Renal Disease Mortality	I10, I13, I15
Intentional Self-Harm (Suicide) Mortality	Y03, X60-X84, Y87.0
Nephritis, Nephrotic Syndrome, and Nephrosis (Kidney disease) Mortality	N00-N07, N17-N19, N25-N27
Total Births	
Deaths of those with age less than 1 year	

ZIP Code definitions

All CDPH indicators used at this stage of the analysis are reported by patient mailing ZIP Codes. ZIP Codes are defined by the U.S. Postal Service as a single location (such as a PO Box), or a set of roads along which addresses are located. The roads that comprise such a ZIP Code may not form contiguous areas and do not match the areas used by the U.S. Census Bureau, which is the main source of population and demographic information in the United States. Instead of measuring the population along a collection of roads, the census reports population figures for distinct, largely contiguous areas. To support the analysis of ZIP Code data, the U.S. Census Bureau created ZCTAs. ZCTAs are created by identifying the dominant ZIP Code for addresses in a given census block (the smallest unit of census data available), and then grouping blocks with the same dominant ZIP Code into a corresponding ZCTA. The creation of ZCTAs allows us to identify population figures that, in combination with the health-outcome data reported at

the ZIP Code level, make it possible to calculate rates for each ZCTA. However, the difference in the definition between mailing ZIP Codes and ZCTAs has two important implications for analyses of ZIP Code level data.

First, ZCTAs are approximate representations of ZIP Codes rather than exact matches. While this is not ideal, it is nevertheless the nature of the data being analyzed. Second, not all ZIP Codes have corresponding ZCTAs. Some PO Box ZIP Codes or other unique ZIP Codes (such as a ZIP Code assigned to a single facility) may not have enough addressees residing in a given census block to ever result in the creation of a ZCTA. But residents whose mailing addresses correspond to these ZIP Codes will still show up in reported health-outcome data. This means that rates cannot be calculated for these ZIP Codes individually because there are no matching ZCTA population figures.

To incorporate these patients into the analysis, the point location (latitude and longitude) of all ZIP Codes in California[19] were compared to ZCTA boundaries.[20] These unique ZIP Codes were then assigned to either the ZCTA in which they fell or, in the case of rural areas that are not completely covered by ZCTAs, the ZCTA closest to them. The CDPH information associated with these PO Boxes or unique ZIP Codes were then added to the ZCTAs to which they were assigned.

For example, 95924 is the PO Box located for Cedar Ridge, CA. ZIP Code 95924 is not represented by a ZCTA, but it could have reported patient data. Through the process identified above, it was found that 95924 is located within the 95945 ZCTA. Data for both ZIP Codes 95924 and 95945 were therefore assigned to ZCTA 95945 and used to calculate rates. All ZIP Code level health outcome variables given in this report are therefore reporting approximate rates for ZCTAs, but for the sake of familiarity of terms they are elsewhere presented as ZIP Code rates.

Rate Smoothing

All CDPH indicators were collected for all ZIP Codes in California. To protect privacy, CDPH masked the data for a given indicator if there were 10 or fewer cases reported in the ZIP Code. ZIP Codes with masked values were treated as having NA values reported, while ZIP Codes not included in a given year were assumed to have 0 cases for the associated indicator. As described above, patient records in ZIP Codes not represented by ZCTAs were added to those ZCTAs that they fell inside or were closest to.

When consolidating ZIP Codes into ZCTAs, if a PO Box ZIP Code with an NA value was combined with a non–PO Box ZIP Code with a reported value, then the NA value for the PO Box ZIP Code was converted to a 0. Thus, ZCTA values were recorded as NA only if all ZIP Codes contributing values to them had their values masked.

The next step in the analysis process was to calculate rates for each of these indicators. However, rather than calculating raw rates, Empirical Bayes smoothed rates (EBRs) were created for all indicators possible.[21] Smoothed rates are considered preferable to raw rates for two main reasons. First, the small

[19] Datasheer, L.L.C. (2018, July 16). *ZIP Code Database Free.* Retrieved from Zip-Codes.com: http://www.Zip-Codes.com

[20] U.S. Census Bureau. (2017). *TIGER/Line Shapefile, 2017, 2010 nation, U.S., 2010 Census 5-Digit ZIP Code Tabulation Area (ZCTA5) National.* Retrieved July 16, 2018, from http://www.census.gov/geo/maps-data/data/tiger-line.html

[21] Anselin, L. (2003). *Rate Maps and Smoothing.* Retrieved February 16, 2013, from http://www.dpi.inpe.br/gi

population of many ZCTAs, particularly those in rural areas, meant that the rates calculated for these areas would be unstable. This problem is sometimes referred to as the small-number problem. Empirical Bayes smoothing seeks to address this issue by adjusting the calculated rate for areas with small populations so that they more closely resemble the mean rate for the entire study area. The amount of this adjustment is greater in areas with smaller populations, and less in areas with larger populations.

Because the EBR were created for all ZCTAs in the state, ZCTAs with small populations that may have unstable high rates had their rates "shrunk" to more closely match the overall indicator rate for ZCTAs in the entire state. This adjustment can be substantial for ZCTAs with very small populations. The difference between raw rates and EBRs in ZCTAs with very large populations, on the other hand, is negligible. In this way, the stable rates in large-population ZIP Codes are preserved, and the unstable rates in smaller-population ZIP Codes are shrunk to more closely match the state norm. While this may not entirely resolve the small-number problem in all cases, it does make the comparison of the resulting rates more appropriate. Because the rate for each ZCTA is adjusted to some degree by the EBR process, this also has a secondary benefit of better preserving the privacy of patients within the ZCTAs.

EBRs were calculated for each mortality indicator using the total population figure reported for ZCTAs in the 2014 American Community Survey 5-year Estimates table DP05. Data for 2014 were used because this represented the central year of the 2012–2016 range of years for which CDPH data were collected. To calculate infant mortality rate, the total number of deaths for the population under one-year-old was divided by the total number of births.

ZCTAs with NA values recorded were treated as having a value of 0 when calculating the overall expected rates for a state during the smoothing process but were kept as NA for the individual ZCTA. This meant that smoothed rates could be calculated for indicators, but if a given ZCTA had a value of NA for a given indicator, it retained that NA value after smoothing.

Empirical Bayes smoothing was attempted for every overall indicator but could not be calculated for some. In these cases, raw rates were used instead. These smoothed or raw mortality rates were then multiplied by 100,000 so that the final rates represented deaths per 100,000 people. In the case of infant mortality, the rates were multiplied by 1,000, so the final rate represents infant deaths per 1,000 live births.

Community Health Vulnerability Index (CHVI)

The CHVI is a health-care-disparity index largely based on the Community Need Index (CNI) developed by Barsi and Roth.[22] The CHVI uses the same basic set of demographic indicators to address healthcare disparities as outlined in the CNI, but these indicators are aggregated in a different manner to create the CHVI. For this report, the following nine indicators were obtained from the 2016 American Community Survey 5-year Estimate dataset at the census tract[23] level and are contained in Table 18.

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[22] Barsi, E. L., & Roth, R. (2005). The Community Needs Index. *Health Progress, 86*(4), 32-38. Retrieved from https://www.chausa.org/docs/default-source/health-progress/the-community-need-index-pdf.pdf?sfvrsn=2

[23] Census tracts are data reporting regions created by the U.S. Census Bureau that roughly correspond to neighborhoods in urban areas but may be geographically much larger in rural locations.

Table 18: Indicators Used to Create the Community Health Vulnerability Index

Indicator	Description	Source Data Table	Variables Included
Minority	The percentage of the population that is Hispanic or reports at least one race that is not white	B0302	HD01_VD01, HD01_VD03
Limited English	The percentage of the population 5 years or older that speaks English less than "well"	B16004	HD01_DD01, HD01_VD07, HD01_VD08, HD01_VD12, HD01_VD13, HD01_VD17, HD01_VD18, HD01_VD22, HD01_VD23, HD01_VD29, HD01_VD30, HD01_VD34, HD01_VD35, HD01_VD39, HD01_VD40, HD01_VD44, HD01_VD45, HD01_VD51, HD01_VD52, HD01_VD56, HD01_VD57, HD01_VD61, HD01_VD62, HD01_VD66, HD01_VD67
Not a High School Graduate	Percentage of population over 25 that are not high school graduates	S1501	HC02_EST_VC17
Unemployed	Unemployment rate among the population 16 or older	S2301	HC04_EST_VC01
Families with Children in Poverty	Percentage of families with children that are in poverty	S1702	HC02_EST_VC02
Elderly Households in Poverty	Percentage of households with householders 65 years or older that are in poverty	B17017	HD01_VD01, HD01_VD08, HD01_VD14, HD01_VD19, HD01_VD25, HD01_VD30
Single-Female-Headed Households in Poverty	Percentage of single-female-headed households with children that are in poverty	S1702	HC02_EST_VC02
Renters	Percentage of the population in renter-occupied housing units	B25008	HD01_VD01, HD01_VD03
Uninsured	Percentage of population that is uninsured	S2701	HC05_EST_VC01

Each indicator was scaled using a min-max stretch so that the tract with the maximum value for a given indicator within the study area received a value of 1, the tract with the minimum value for that same indicator within the study area received a 0, and all other tracts received some value between 0 and 1 proportional to their reported values. All scaled indicators were then summed to form the final CHVI. Areas with higher CHVI values therefore represent locations with relatively higher concentrations of the target index populations and are likely experiencing greater health disparities.

Significant Health Need Identification Dataset

The third set of secondary data used in the analysis were the health-factor and health-outcome indicators used to identify the significant health needs. The selection of these indicators was guided by the previously identified conceptual model. Table 19 lists these indicators, their sources, the years they were measured, and the health-related characteristics from the conceptual model they are primarily used to represent.

Table 19: Health Factor and Health Outcome Data Used in CHA/CHNA, Including Data Source and Time Period in Which the Data Were Collected

Conceptual Model Alignment			Indicator	Data Source	Time Period
Health outcomes	Length of life	Infant mortality	Infant Mortality Rate	CHR*	2010-2016
		Life expectancy	Life Expectancy at Birth	CDPH†	2012-2016
		Mortality	Age-adjusted mortality	CDPH	2012-2016
			Alzheimer's Disease mortality	CDPH	2012-2016
			Child mortality	CHR	2013-2016
			Premature age-adjusted mortality	CHR	2014-2016
			Premature death (Years of Potential Life Lost)	CHR	2014-2016
			Cerebrovascular Disease (Stroke)	CDPH	2012-2016
			Chronic Lower Respiratory Disease	CDPH	2012-2016
			Diabetes Mellitus	CDPH	2012-2016
			Diseases of the Heart	CDPH	2012-2016
			Essential Hypertension & Hypertensive Renal Disease	CDPH	2012-2016
			Influenza and Pneumonia	CDPH	2012-2016
			Intentional Self Harm (Suicide)	CDPH	2012-2016
			Liver Disease	CDPH	2012-2016
			Malignant Neoplasms (Cancer)	CDPH	2012-2016
			Nephritis, Nephrotic Syndrome and Nephrosis (Kidney Disease)	CDPH	2012-2016
			Unintentional Injuries (Accidents)	CDPH	2012-2016
			Opioid Overdose Deaths	CDPH	2017
			Female Breast Cancer Mortality	CDPH	2014-2016
			Colorectal Cancer Mortality	CDPH	2014-2016

Conceptual Model Alignment			Indicator	Data Source	Time Period
			Lung Cancer Mortality	CDPH	2014-2016
			Prostate Cancer Mortality	CDPH	2014-2016
			Breast Cancer Incidence	California Cancer Registry	2010-2014
			Colorectal Cancer Incidence	California Cancer Registry	2010-2014
			Diabetes prevalence	CHR	2014
			Disability	Census	2016
			HIV prevalence rate	CHR	2015
			Low birthweight	CHR	2010-2016
			Lung Cancer Incidence	California Cancer Registry	2010-2014
			Prostate Cancer Incidence	California Cancer Registry	2010-2014
	Quality of life	Morbidity	Poor mental health days	CHR	2016
			Poor physical health days	CHR	2016
			Hepatitis C Virus	CDPH‡	2015
			Nonfatal Poisonings	OSHPD	2014
			Invasive Cancer Incidence	California Cancer Registry	2010-2015
			Prediabetes	UCLA Center for Health Policy Research and California Center for Public Health Advocacy	2016
			Asthma	California Health and Human Services	2016
Health factors	Health Behavior	Alcohol and drug use	Excessive drinking	CHR	2016
			Drug Overdose Deaths	CDPH	2014-2016
			Substance Use Hospitalizations	CDPH	2014
			ED Utilization for Substance Abuse	CDPH	2014
			Unintentional Poisonings	CDPH	2014

Conceptual Model Alignment			Indicator	Data Source	Time Period
			ED Visits for Opioid Overdose	CDPH	2017
		Diet and exercise	Adult obesity	CHR	2014
			Physical inactivity	CHR	2014
			Limited access to healthy foods	CHR	2015
			Modified Retail Food Environment Index (mRFEI)	Census	2016
			Access to exercise opportunities	CHR	2010 population/ 2016 facilities
			Food Insecurity, Children	CalFresh	2017
			Food Insecurity, Overall	CalFresh	2017
			Youth Obesity Rates	SNAP-ED County Profiles	2017
			Breastfeeding (in Hospital Exclusive)	CDPH	2016
		Sexual activity	Chlamydia Rate	CDPH	2017
			Gonorrhea Rate	CDPH	2017
			Teen birth rate	CHR	2010-2016
		Tobacco use	Adult smoking	CHR	2016
			E Products use	CDPH	2016
	Clinical care	Access to care	Healthcare costs	CHR	2015
			Health Professional Shortage Area - Dental	HRSA§	2018
			Health Professional Shortage Area - Mental Health	HRSA	2018
			Heath Professional Shortage Area - Primary Care	HRSA	2018
			Medically Underserved Areas	HRSA	2018
			Mammography screening	CHR	2014
			Dentists	CHR	2016
			Mental health providers	CHR	2017
			Psychiatrists	HRSA	2015
			Specialty Care providers	HRSA	2015
			Primary care physicians	CHR	2015
			Seventh Grade Immunization Rates	CDPH	2016-2017
			Kindergarten Immunization Rates	CDPH	2017-2018

Conceptual Model Alignment			Indicator	Data Source	Time Period
			Prenatal Care	FHOP Family Health Outcomes Project University of California, San Francisco	2015
		Quality care	Preventable hospital stays (Ambulatory Care Sensitive Conditions)	CHR	2015
	Social & economic/ Demographic factors	Community safety	Homicide rate	CHR	2010-2016
			Violent crime rate	CHR	2012-2014
			Motor vehicle crash death rate	CHR	2010-2016
		Education	Some college (post-secondary education)	CHR	2012-2016
			High school graduation	CHR	2014-2015
		Employment	Unemployment	CHR	2016
		Family and social support	Children in single-parent households	CHR	2012-2016
			Social associations	CHR	2015
		Income	Children eligible for free lunch	CHR	2015-2016
			Children in poverty	CHR	2016
			Median household income	CHR	2016
			Uninsured	CHR	2015
	Physical Environment	Housing and transit	Severe Housing problems	CHR	2010-2014
			Homelessness	Nevada County Homeless Point in Time Count	2018
			Households with no vehicle	Census	2012-2016
			Access to Public Transit	Census/ GTSF data	2010,2012-2016,2018
		Air and water quality	Pollution Burden Score	Cal-EnviroScreen	2017
			Air pollution - particulate matter	CHR	2012
			Drinking water violations	CHR	2016

*County Health Rankings
†California Department of Public Health
‡California Office of Statewide Health Planning and Development
§Health Resources and Services Administration

County Health Rankings Data

All indicators listed with County Health Rankings (CHR) as their source were obtained from the 2018 County Health Rankings[24] dataset. This was the most common source of data, with 38 associated indicators included in the analysis. Indicators were collected at both the county and state levels. County-level indicators were used to represent the health factors and health outcomes in the county. State-level indicators were collected to be used as benchmarks for comparison purposes. All variables included in the CHR dataset were obtained from other data providers. The original data providers for each CHR variable are given in Table 20.

Table 20: County Health Rankings Data Set, Including Indicators, the Time Period the Data Were Collected, and the Original Source of the Data

CHR Indicator	Time Period	Original Data Provider
Infant Mortality Rate	2010–2016	CDC WONDER Mortality Data
Child Mortality	2013–2016	CDC WONDER Mortality Data
Premature Age-Adjusted Mortality	2014–2016	CDC WONDER Mortality Data
Premature Death (Years of Potential Life Lost)	2014–2016	National Center for Health Statistics - Mortality Files
Diabetes Prevalence	2014	CDC Diabetes Interactive Atlas
HIV Prevalence Rate	2015	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Low Birth Weight	2010–2016	National Center for Health Statistics - Natality Files
Poor Mental Health Days	2016	Behavioral Risk Factor Surveillance System
Poor Physical Health Days	2016	Behavioral Risk Factor Surveillance System
Excessive Drinking	2016	Behavioral Risk Factor Surveillance System
Adult Obesity	2014	CDC Diabetes Interactive Atlas
Physical Inactivity	2014	CDC Diabetes Interactive Atlas
Limited Access to Healthy Foods	2015	USDA Food Environment Atlas
Access to Exercise Opportunities	2010 population/ 2016 facilities	Business Analyst, Delorme Map Data, ESRI, & U.S. Census Tiger Line Files
Sexually Transmitted Infections (Chlamydia Rate)	2015	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Teen Birth Rate	2010–2016	National Center for Health Statistics - Natality Files
Adult Smoking	2016	Behavioral Risk Factor Surveillance System
Healthcare Costs	2015	Dartmouth Atlas of Healthcare
Mammography Screening	2014	Dartmouth Atlas of Healthcare
Dentists	2016	Area Health Resource File/National Provider Identification File
Mental Health Providers	2017	CMS, National Provider Identification
Primary Care Physicians	2015	Area Health Resource File/American Medical Association

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[24] Robert Wood Johnson Foundation. 2018. *County Health Rankings & Roadmaps*. Available online at: http://www.countyhealthrankings.org/. Accessed July 10, 2018.

CHR Indicator	Time Period	Original Data Provider
Preventable Hospital Stays (Ambulatory Care Sensitive Conditions)	2015	Dartmouth Atlas of Healthcare
Homicide Rate	2010–2016	CDC WONDER Mortality Data
Violent Crime Rate	2012–2014	Uniform Crime Reporting - FBI
Motor Vehicle Crash Death Rate	2010–2016	CDC WONDER Mortality Data
Some College (Postsecondary Education)	2012–2016	American Community Survey, 5-Year Estimates
High School Graduation	2014–2015	California Department of Education
Unemployment	2016	Bureau of Labor Statistics Local Area Unemployment Statistics
Children in Single-Parent Households	2012–2016	ACS 5-Year Estimates
Social Associations	2015	County Business Patterns
Children Eligible for Free Lunch	2015–2016	National Center for Education Statistics
Children in Poverty	2016	U.S. Census Bureau Small Area Income and Poverty Estimates
Median Household Income	2016	U.S. Census Bureau Small Area Income and Poverty Estimates
Uninsured	2015	U.S. Census Bureau Small Area Health Insurance Estimates
Severe Housing Problems	2010–2014	HUD Comprehensive Housing Affordability Strategy (CHAS) Data
Air Pollution - Particulate Matter	2012	CDC's National Environmental Public Health Tracking Network
Drinking Water Violations	2016	Safe Drinking Water Information System

CDPH Data

The next most common source of health-outcome and health-factor variables used for health need identification was California Department of Public Health (CDPH). This includes the same by-cause mortality rates as those described previously. But in this case, they were calculated at the county level to represent health conditions in the county and at the state level to be used as comparative benchmarks. County-level rates were smoothed using the same process described previously. State-level rates were not smoothed.

Drug overdose deaths and age-adjusted mortality rates were also obtained from CDPH. These indicators report age-adjusted drug-induced death rates and age-adjusted all-cause mortality rates for counties and the state from 2014 to 2016 as reported in the 2018 County Health Status Profiles.[25]

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[25] California Department of Public Health. 2018. *County Health Status Profiles 2018*. Available online at: https://www.cdph.ca.gov/Programs/CHSI/Pages/County-Health-Status-Profiles.aspx. Last accessed October 23, 2018.

HRSA Data

Indicators related to the availability of healthcare providers were obtained from the Health Resources and Services Administration[26] (HRSA). These included Dental, Mental Health, and Primary Care Health Professional Shortage Areas and Medically Underserved Areas/Populations. They also included the number of specialty care providers and psychiatrists per 100,000 residents, derived from the county-level Area Health Resource Files.

The health professional shortage area and medically underserved area data were not provided at the county level. Rather, they are showed as all areas in the state that were designated as shortage areas. These areas could include a portion of a county or an entire county, or they could span multiple counties. To develop measures at the county level to match the other health-factor and health-outcome indicators used in health need identification, these shortage areas were compared to the boundaries of each county in the state. Counties that were partially or entirely covered by a shortage area were noted.

The HRSA's Area Health Resource Files provide information on physicians and allied healthcare providers for U.S. counties. This information was used to determine the rate of specialty care providers and the rate of psychiatrists for each county and for the state. For the purposes of this analysis, a specialty care provider was defined as a physician who was not defined by the HRSA as a primary care provider. This was found by subtracting the total number of primary care physicians (both MDs and DOs, primary care, patient care, and nonfederal, excluding hospital residents and those 75 years of age or older) from the total number of physicians (both MDs and DOs, patient care, nonfederal) in 2015. This number was then divided by the 2015 total population given in the 2015 American Community Survey 5-year Estimates table B01003, and then multiplied by 100,000 to give the total number of specialty care physicians per 100,000 residents. The total of specialty care physicians in each county was summed to find the total specialty care physicians in the state, and state rates were calculated following the same approach as used for county rates. This same process was also used to calculate the number of psychiatrists per 100,000 for each county and the state using the number of total patient care, nonfederal psychiatrists from the Area Health Resource Files. It should be noted that psychiatrists are included in the list of specialty care physicians, so that indicator represents a subset of specialty care providers rather than a separate group.

California Cancer Registry Data

Data obtained from the California Cancer Registry[27] includes age-adjusted incidence rates for colon and rectum, female breast, lung and bronchus, and prostate cancer sites for counties and the state. Reported rates were based on data from 2010 to 2014, and report cases per 100,000. For low-population counties, rates were calculated for a group of counties rather than for individual counties. That group rate was used in this report to represent incidence rates for each individual county in the group.

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[26] Health Resources and Services Administration. 2018. Data Downloads, Available online at: https://data.hrsa.gov/data/download. Last accessed June 19 2018 (for county level Area Health Resource Files) and 1 August 2018 (for Health Professional Shortage Area files)

[27] California Cancer Registry. 2018. *Age-Adjusted Invasive Cancer Incidence Rates in California*. Available online at: https://www.cancer-rates.info/ca/. Accessed: May 11, 2018.

Census Data

Data from the U.S. Census Bureau were used to calculate three additional indicators: the percentage of households with no vehicle available, the percentage of the civilian noninstitutionalized population with some disability, and the Modified Retail Food Environment Index (mRFEI). The sources for the indicators used are given in Table 21.

Table 21: Detailed Description of Data Used to Calculate Percentage of Population with Disabilities, Households Without a Vehicle, and the mRFEI

Indicator	Source Data Table	Variable	NAICS code	Employee Size Category	Data Source
Percentage with Disability	S1810	HC03_EST_VC01			2016 American Community Survey 5-Year Estimates
Households with No Vehicle Available	DP04	HC03_VC85			
Large Grocery Stores	BP_2016_00A3	Number of Establishments	445110	10 or More Employees	2016 County Business Patterns
Fruit and Vegetable Markets	BP_2016_00A3	Number of Establishments	445230	All Establishments	
Warehouse Clubs	BP_2016_00A3	Number of Establishments	452910	All Establishments	
Small Grocery Stores	BP_2016_00A3	Number of Establishments	445110	1 to 4 Employees	
Limited-Service Restaurants	BP_2016_00A3	Number of Establishments	722513	All Establishments	
Convenience Stores	BP_2016_00A3	Number of Establishments	445120	All Establishments	

The mRFEI indicator reports the percentage of the total food outlets in a ZCTA that are considered healthy food outlets. The mRFEI indicator was calculated using a modification of the methods described by the National Center for Chronic Disease Prevention and Health Promotion[28] using data obtained from the U.S. Census Bureau's 2016 County Business Pattern datasets.

Healthy food retailers were defined based on North American Industrial Classification Codes (NAICS), and included large grocery stores, fruit and vegetable markets, and warehouse clubs.
Food retailers that were considered less healthy included small grocery stores, limited-service restaurants, and convenience stores.

To calculate the mRFEI, the total number of health food retailers was divided by the total number of healthy and less healthy food retailers, and the result was multiplied by 100 to calculate the final mRFEI value for each county and for the state.

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[28] National Center for Chronic Disease Prevention and Health Promotion. (2011). *Census Tract Level State Maps of the Modified Retail Food Environment Index (mRFEI).* Centers for Disease Control. Retrieved Jan 11, 2016, from http://ftp.cdc.gov/pub/Publications/dnpao/census-tract-level-state-maps-mrfei_TAG508.pdf

CalEnviroScreen Data

CalEnviroScreen[29] is a dataset produced by CalEPA. It includes multiple indicators associated with various forms of pollution for census tracts within the state. These include multiple measures of air and water pollution, pesticides, toxic releases, traffic density, cleanup sites, groundwater threats, hazardous waste, solid waste, and impaired bodies of water. One indicator, pollution burden, combines all of these measures to generate an overall index of pollution for each tract. To generate a county-level pollution-burden measure, the percentage of the population residing in census tracts with pollution-burden scores greater than or equal to the 50th percentile was calculated for each county as well as for the state.

Google Transit Feed Specification (GTFS) Data

The final indicator used to identify significant health needs measures was proximity to public transportation. This indicator reports the percentage of a county's population that lives in a census block located within a quarter mile of a fixed transit stop. Census block data from 2010 (the most recent year available) was used to measure population.

An extensive search was conducted to identify stop locations for transportation agencies in the service area. Many transportation agencies publish their route and stop locations using the standard GTFS data format. Listings for agencies covering the service area were reviewed at TransitFeeds (https://transitfeeds.com) and Trillium (https://trilliumtransit.com/gtfs/our-work/). These were compared to the list of feeds used by Google Maps (https://www.google.com/landing/transit/cities/index.html#NorthAmerica) to try to maximize coverage.

Table 22 notes the agencies for which transit stops could be obtained. It should be noted that while every attempt was made to include as comprehensive a list of data sources as possible, there may be transit stops associated with agencies not included in this list in the county. Caution should therefore be used in interpreting this indicator.

Table 22: Transportation Agencies Used to Compile Proximity to Public Transportation Indicator

County	Agency
Tahoe Area (Nevada, Placer, El Dorado Counties)	Town of Truckee, Tahoe Truckee Area Regional Transit, Tahoe Transportation District, Alpine Meadows Shuttle, Northstar-at-Tahoe, North Lake Tahoe Express
Nevada County	Gold Country Stage
Nevada	NevadaBus, Unitrans
Yuba/Sutter	Yuba-Sutter Transit

Descriptive Socioeconomic and Demographic Data

The final secondary data set used in this analysis was comprised of multiple socioeconomic and demographic indicators collected at the ZCTA, county, and state level. These data were not used in an

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[29] CalEPA. 2018. CalEnviroscreen 3.0 Shapefile. Available online at: https://data.ca.gov/dataset/calenviroscreen-30. Last accessed: May 26, 2018.

analytical context. Rather, they were used to provide a description of the overall population characteristics within the county. Table 23 lists each of these indicators as well as their sources.

Table 23: Descriptive Socioeconomic and Demographic Data Descriptions

Indicator	Description	Source Data Table	Variables Included
Population	Total population	DP05	HC01_VC03
Minority	The percentage of the population that is Hispanic or reports at least one race that is not white	B0302	HD01_VD01, HD01_VD03
Median Age	Median age of the population	DP05	HC01_VC23
Median Income	Median household income	S2503	HC01_EST_VC14
Poverty	Percentage of population below the poverty level	S1701	HC03_EST_VC01
Unemployed	Unemployment rate among the population 16 or older	S2301	HC04_EST_VC01
Uninsured	Percentage of population without health insurance	S2701	HC05_EST_VC01
Not a High School Graduate	Percentage of population over 25 that are not high school graduates	S1501	HC02_EST_VC17
High Housing Costs	Percentage of the population for whom total housing costs exceed 30% of income	S2503	HC01_EST_VC33, HC01_EST_VC37, HC01_EST_VC41, HC01_EST_VC45, HC01_EST_VC49
Disability	Percentage of civilian noninstitutionalized population with a disability	S1810	HC03_EST_VC01

Detailed Analytical Methodology

The collected and processed primary and secondary data were integrated in three main analytical stages. In the first stage, secondary health-outcome and health-factor data were combined with primary data collected from key informant interviews providing an overall view of the county to identify Communities of Concern. These Communities of Concern potentially included geographic regions and specific subpopulations, in which certain populations bear disproportionate health burdens. The identified Communities of Concern are then used to focus the remaining interview and focus-group collection efforts on those areas and subpopulations. The resulting data is then combined with survey results and secondary health need identification data to identify significant health needs within the service area. Finally, primary data (focus group, interview, and survey results) is used to prioritize those identified significant health needs. The specific details for these analytical steps are given in the following three sections.

Community of Concern Identification
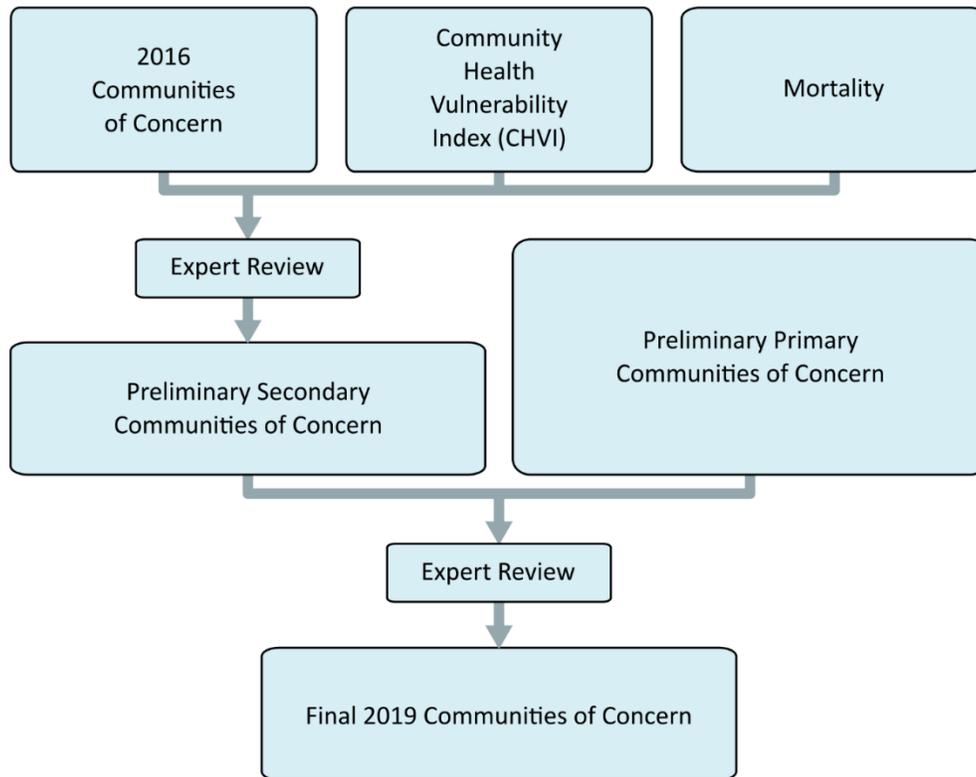
Figure 16: Process followed to identify Communities of Concern

As illustrated in Figure 16, the 2019 Communities of Concern were identified through a process that drew upon both primary and secondary data. Three main secondary data sources were used in this analysis: Communities of Concern identified in the 2016 CHNA; the census tract–level Community Health Vulnerability Index (CHVI); and the CDPH ZCTA-level mortality data.

An evaluation procedure was developed for each of these data sets and applied to each ZCTA within the county. The following secondary data selection criteria were used to identify preliminary Communities of Concern.

2016 Community of Concern
The ZCTA was included in the 2016 CHNA Community of Concern list for the hospital service area of SNMH. This was done to allow greater continuity between the 2016 CHNA round and the current assessment, and it reflects the work of the partners to serve these disadvantaged communities.

Community Health Vulnerability Index (CHVI)
The ZCTA intersected a census tract whose CHVI value fell within the top 20% of the county. Census tracts with these values represent areas with consistently high concentrations of demographic subgroups identified in the research literature as being more likely to experience health-related disadvantages.

Mortality

The review of ZCTAs based on mortality data utilized the ZCTA-level CDPH health-outcome indicators described previously. These indicators were heart disease, cancer, stroke, CLD, Alzheimer's disease, unintentional injuries, diabetes, influenza and pneumonia, chronic liver disease, hypertension, suicide, and kidney disease mortality rates per 100,000 people, and infant mortality rates per 1,000 live births. The number of times each ZCTA's rates for these indicators fell within the top 20% in the county was counted. Those ZCTAs whose counted values exceeded the 80th percentile for all of the ZCTAs in the county met the Community of Concern mortality selection criteria.

Integration of Secondary Criteria

Any ZCTA that met any of the three selection criteria (2016 Community of Concern, CHVI, and mortality) was reviewed for inclusion as a 2019 Community of Concern, with greater weight given to those ZCTAs meeting two or more of the selection criteria. An additional round of expert review was applied to determine if any other ZCTAs not thus far indicated should be included based on some other unanticipated secondary data consideration. This list then became the final preliminary secondary Communities of Concern.

Preliminary Primary Communities of Concern

Preliminary primary Communities of Concern were identified by reviewing the geographic locations or population subgroups that were consistently identified by the area-wide primary data sources.

Integration of Preliminary Primary and Secondary Communities of Concern

Any ZCTA that was identified in either the preliminary primary or secondary Community of Concern list was considered for inclusion as a 2019 Community of Concern. An additional round of expert review was then applied to determine if, based on any primary or secondary data consideration, any final adjustments should be made to this list. The resulting set of ZCTAs was then used as the final 2019 Communities of Concern.

Significant Health Need Identification

The general methods through which significant health needs (SHNs) were identified are shown in Figure 17 and described here in greater detail. The first step in this process was to identify a set of potential health needs (PHNs) from which significant health needs could be selected. This was done by reviewing the health needs identified during the 2016 CHNA among various hospitals throughout northern California and then supplementing this list based on a preliminary analysis of the primary qualitative data collected for the 2019 CHNA. This resulted in a list of 10 PHNs for the county, shown in Table 24.
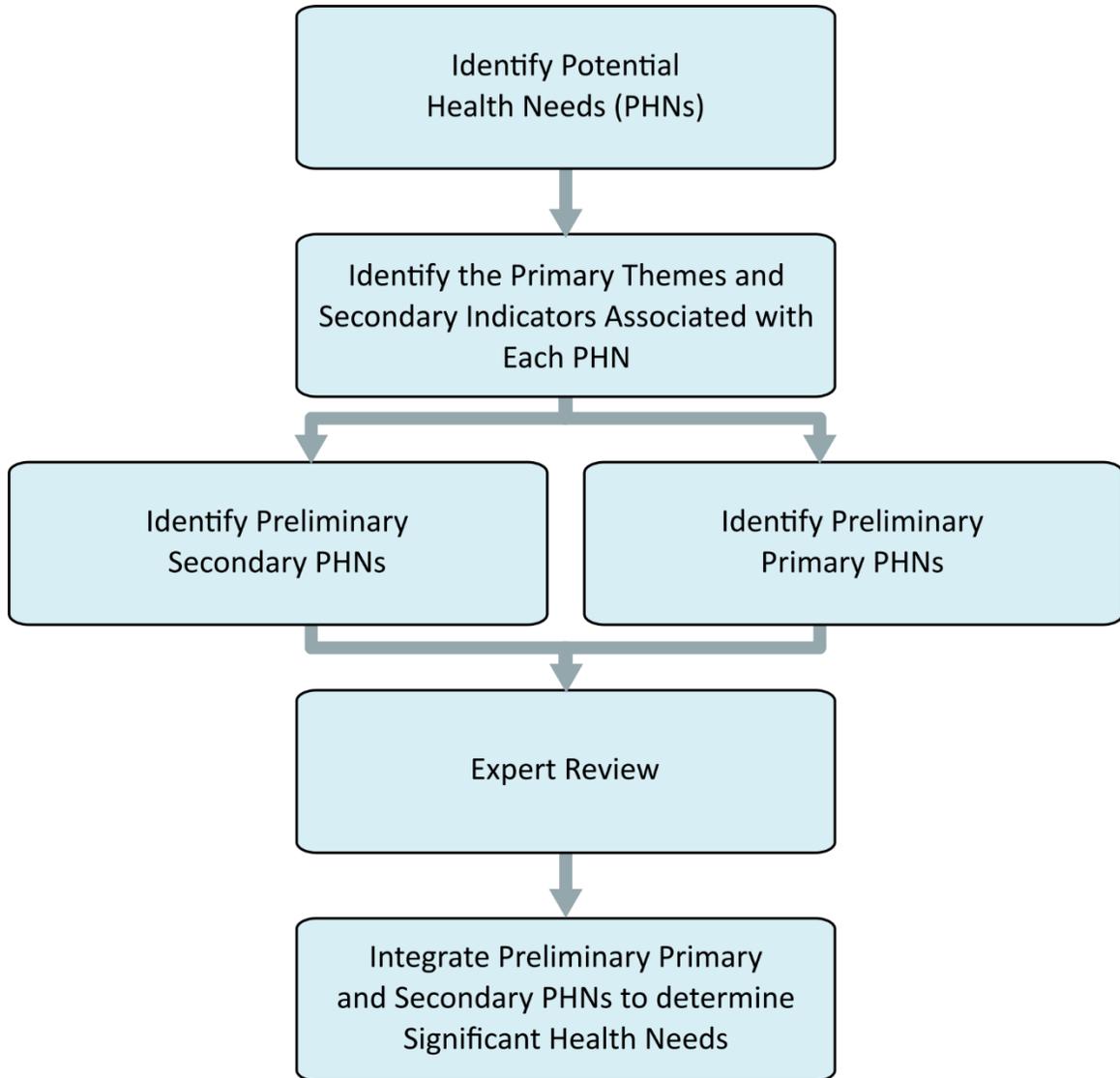
Figure 17: Process followed to identify Significant Health Needs

Table 24: Potential Health Needs

2019 Potential Health Needs (PHNs)	
PHN1	Access to Mental/Behavioral/Substance Abuse Services
PHN2	Access to Quality Primary Care Health Services
PHN3	Active Living and Healthy Eating
PHN4	Safe and Violence-Free Environment
PHN5	Access to Dental Care and Preventive Services
PHN6	Pollution-Free Living Environment
PHN7	Access to Basic Needs such as Housing, Jobs, and Food
PHN8	Access and Functional Needs
PHN9	Access to Specialty and Extended Care
PHN10	Injury and Disease Prevention and Management

The next step in the process was to identify secondary indicators and primary qualitative themes associated with each of these health needs as shown in Table 25. Primary theme associations were used to guide coding of the primary qualitative data sources to specific PHNs.

Table 25: Secondary Indicator Associations and Qualitative Primary Indicators used to Identify Significant Health Needs

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Qualitative Primary Indicators
PHN1	Access to Mental/ Behavioral/ Substance Abuse Services	• Life Expectancy at Birth • Liver Disease Mortality • Suicide mortality • Poor Mental Health days • Poor Physical Health days • Drug Overdose Deaths • Excessive Drinking • Health Professional Shortage Area – Mental Health • Mental Health Providers • Psychiatrists • Social associations • Liver Cancer Incidence • Mental Health/Drug Related Hospitalizations • Hospitalizations for Self-Inflicted Injuries in Youth • Mental Health Hospitalizations in Youth	• Self-injury • Mental health and coping issues • Substance abuse • Smoking • Stress • Mentally ill homeless • PTSD • Access to psychiatrist • Homelessness

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
PHN2	Access to Quality Primary Care Health Services	• Life Expectancy at Birth • Cancer Mortality • Child Mortality • Chronic Lower Respiratory Disease Mortality • Diabetes Mortality • Heart Disease Mortality • Hypertension Mortality • Influenza and Pneumonia Mortality • Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality • Breast Cancer Incidence • Colorectal Cancer Incidence • Diabetes Prevalence	• Issue of quality of care • Access to care • Health insurance • Care for cancer/cancer occurrence • Indicators in PQI: Diabetes, COPD, CRLD, HTN, HTD, Asthma, Pneumonia

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
		• Low Birthweight • Lung Cancer Incidence • Prostate Cancer Incidence • Healthcare Costs • Health Professional Shortage Area – Primary Care • Medically Underserved Areas • Mammography Screening • Primary Care Physicians • Preventable hospital stays • Percentage Uninsured • Prenatal Care (1st Trimester) • Liver Cancer Incidence • Hospitalizations for Diabetes, Long Term Complications • Preterm Births • ED Visits for Asthma • Colon Cancer Hospitalizations	
PHN3	Active Living and Healthy Eating	• Cancer Mortality • Diabetes Mortality • Heart Disease Mortality • Hypertension Mortality • Kidney Disease Mortality • Stroke Mortality • Breast Cancer Incidence • Colorectal Cancer Incidence • Diabetes Prevalence • Prostate Cancer Incidence • Limited Access to Healthy Foods • mRFEI • Access to Exercise Opportunities • Physical Inactivity • Adult Obesity • Breastfeeding Rate (Exclusive in Hospital) • Hospitalizations for Diabetes, Long Term Complications • Colon Cancer Hospitalizations	• Food access/insecurity • Community gardens • Fresh fruits and veggies • Distance to grocery stores • Food swamps • Chronic disease outcomes related to poor eating • Diabetes, HTD, HTN, Stroke, Kidney issues, Cancer • Access to parks • Places to be active
Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
PHN4	Safe and Violence-Free Environment	• Life Expectancy at Birth • Poor Mental Health Days • Homicide Rate • Motor Vehicle Crash Death Rate • Violent Crime Rate • Social Associations • Mental Health/Drug Related Hospitalizations • Hospitalizations for Self-Inflicted Injuries in Youth • Mental Health Hospitalizations in Youth	• Crime rates • Violence in the community • Feeling unsafe in the community • Substance abuse-alcohol and drugs • Access to safe parks • Pedestrian safety • Safe streets • Safe places to be active
Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
PHN5	Access to Dental Care and Preventive Services	• Dentists • Health Professional Shortage Area – Dental • ED Visits by Children with Dental Diagnosis • ED Visits by Adults with Dental Diagnosis	• Any issues related to dental health • Access to dental care
Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
PHN6	Pollution-Free Living Environment	• Cancer Mortality • Chronic Lower Respiratory Disease Mortality • Breast Cancer Incidence • Colorectal Cancer Incidence • Lung Cancer Incidence • Prostate Cancer Incidence • Adult Smoking • Air Pollution – Particulate Matter • Drinking Water Violations • Pollution Burden • ED Visits for Asthma	• Smoking • Unhealthy air, water, housing, • Health issues: Asthma, COPD, CLRD, Lung Cancer
Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
PHN7	Access to Basic Needs such as Housing, Jobs, and Food	• Life Expectancy at Birth • Infant Mortality • Age-Adjusted All-Cause Mortality • Child Mortality • Premature Age-Adjusted Mortality • Premature Death (Years of Potential Life Lost) • Low Birthweight • Medically Underserved Areas • Healthcare Costs • High School Graduation • Some College (post-secondary education) • Unemployment • Children in Single-Parent Household • Social Associations • Children Eligible for Free Lunch • Children in Poverty • Median Household Income • Uninsured • Severe Housing Problems • Households with no Vehicle • mRFEI • Limited Access to Healthy Food • Breastfeeding Rate (Exclusive in Hospital) • Third-Grade Reading Level • English Language Learners • ED Visits for Asthma	• Employment and unemployment • Poverty • Housing issues • Homelessness • Education access • Community quality of life • Housing availability • Housing affordability
Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
PHN8	Access and Functional Needs	• Access to Public Transportation • Households with no Vehicle • Percentage of Population with a Disability	• Physical access issues • Cost of transportation • Ease of transportation access • No car • Disability
Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
PHN9	Access to Specialty and Extended Care	• Life Expectancy at Birth • Alzheimer's Mortality • Cancer Mortality • Chronic Lower Respiratory Disease Mortality • Diabetes Mortality • Heart Disease Mortality • Hypertension Mortality • Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality • Diabetes Prevalence • Lung Cancer Incidence • Psychiatrists • Specialty Care Providers • Preventable Hospital Stays • Liver Cancer Incidence • Colon Cancer Hospitalizations	• Seeing a specialist for health conditions • Diabetes related specialty care • Specialty care for: HTD, HTN, Stroke, Kidney diseases
PHN10	Injury and Disease Prevention and Management	• Infant mortality • Alzheimer's Mortality • Child mortality • Chronic Lower Respiratory Disease Mortality • Diabetes Mortality • Heart Disease Mortality • Hypertension Mortality • Influenza and Pneumonia Mortality • Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality • Suicide Mortality • Unintentional Injury Mortality • Diabetes Prevalence • HIV Prevalence Rate • Low Birthweight • Drug Overdose Deaths • Excessive Drinking • Adult Obesity • Physical Inactivity • Sexually Transmitted Infections • Teen Birth Rate • Adult Smoking • Motor Vehicle Crash Death Rate	• Anything related to helping people prevent getting a preventable disease or injury • Unintentional injury • Smoking and alcohol/drug abuse • Teen pregnancy • HIV/STD • TB • Influenza and Pneumonia • Health classes • Health promotion teams and interventions • Need for health literacy

| | | • Breastfeeding Rate (Exclusive in Hospitals)
• Prenatal Care (1st Trimester)
• Hospitalizations for Diabetes, Long Term Complications
• Liver Cancer Incidence
• ED Visits for Asthma
• Mental Health/Drug Related Hospitalizations
• Hospitalizations for Self-Inflicted Injuries in Youth
• Mental Health Hospitalizations in Youth
• ED Visits Due to falls Age 65+
• Hospitalization Due to Falls Age 65+
• Colon Cancer Hospitalization | |

Next, values for the secondary health-factor and health-outcome indicators identified were compared to state benchmarks to determine if a secondary indicator performed poorly within the county. Some indicators were considered problematic if they exceeded the benchmark, others were considered problematic if they were below the benchmark, and the presence of certain other indicators within the county, such as health professional shortage areas, indicated issues. Table 26 lists each secondary indicator and describes the comparison made to the benchmark to determine if it was problematic.

Table 26: Benchmark Comparisons to Show Indicator Performance for Nevada County CHNA/CHA Indicators

Indicator	Benchmark Comparison Indicating Poor Performance
Years of Potential Life Lost	Higher
Poor Physical Health Days	Higher
Poor Mental Health Days	Higher
Low Birth Weight	Higher
Adult Smokers	Higher
Adult Obesity	Higher
Physical Inactivity	Higher
Access to Exercise	Lower
Excessive Drinking	Higher
Teen Birth Rate	Higher
Uninsured	Higher
Primary Care Physicians	Lower
Dentists	Lower
Mental Health Providers	Lower
Preventable Hospital Stays	Higher
Mammography Screening	Lower
High School Graduation	Lower

Indicator	Benchmark Comparison Indicating Poor Performance
Some College	Lower
Unemployed	Higher
Children in Poverty	Higher
Children with Single Parents	Higher
Social Associations	Lower
Violent Crimes	Higher
Air Particulate Matter	Higher
Drinking Water Violations	Present
Severe Housing Problems	Higher
Premature Age-adjusted Mortality	Higher
Child Mortality	Higher
Infant Mortality	Higher
Diabetes Prevalence	Higher
HIV Prevalence	Higher
Limited Access to Healthy Food	Higher
Motor Vehicle Crash Deaths	Higher
Healthcare Costs	Higher
Median Household Income	Lower
Free Reduced Lunch	Higher
Homicides	Higher
Cancer Female Breast	Higher
Cancer Colon and Rectum	Higher
Cancer Lung and Bronchus	Higher
Cancer Prostate	Higher
Drug Overdose Deaths	Higher
HPSA Dental Health	Present
HPSA Mental Health	Present
HPSA Primary Care	Present
HPSA Medically Underserved Area	Present
mRFEI	Lower
Housing Units No Vehicle	Higher
Specialty Care Providers	Lower
Psychiatry Providers	Lower
Cancer Mortality	Higher
Heart Disease Mortality	Higher
Unintentional Injury Mortality	Higher
CLD Mortality	Higher
Stroke Mortality	Higher
Alzheimer's Mortality	Higher
Diabetes Mortality	Higher

Indicator	Benchmark Comparison Indicating Poor Performance
Suicide Mortality	Higher
Hypertension Mortality	Higher
Influenza Pneumonia Mortality	Higher
Kidney Disease Mortality	Higher
Liver Disease Mortality	Higher
Life Expectancy	Lower
Age-adjusted Mortality	Higher
Pollution Burden	Higher
Public Transit Proximity	Lower
Percentage with Disability	Higher
Gonorrhea Rate	Higher
Chlamydia Rate	Higher
Hepatitis C Virus	Higher
Nonfatal Poisoning	Higher
Opioid Overdose Deaths	Higher
Substance Use Hospitalizations	Higher
ED Utilization Substance Use	Higher
Unintentional Poisonings	Higher
ED Visit Opioid Overdose	Higher
E Products Use	Higher
Female Breast Cancer Mortality	Higher
Colorectal Cancer Mortality	Higher
Invasive Cancer Incidence	Higher
Lung Cancer Mortality	Higher
Prostate Cancer Mortality	Higher
Food Insecurity Children	Higher
Food Insecurity Overall	Higher
Youth Obesity Rates	Higher
Homelessness	Higher
Immunization Rates 7th Grade	Lower
Immunization Rates Kindergarten	Lower
In Hospital Exclusive Breastfeeding	Lower
Prenatal Care	Lower
Prediabetes	Higher
Asthma	Higher

Once these poorly performing quantitative indicators were identified, they were used to identify preliminary secondary significant health needs. This was done by calculating the percentage of all secondary indicators associated with a given PHN that were identified as performing poorly within the county. While all PHNs represented actual health needs within the county to a greater or lesser extent, a

PHN was considered a preliminary secondary health need if the percentage of poorly performing indicators exceeded one of a number of established thresholds: any poorly performing associated secondary indicators; or at least 20%, 25%, 33%, 40%, 50%, 60%, 66%, 75%, or 80% of the associated indicators were found to perform poorly. These thresholds were chosen because they correspond to divisions of the indicators into fifths, quarters, thirds, or halves. A similar set of standards was used to identify the preliminary interview and focus-group health needs: any of the survey respondents mentioned a theme associated with a PHN, or if at least 20%, 25%, 33%, 40%, 50%, 60%, 66%, 75%, or 80% of the respondents mentioned an associated theme. Finally, the same basic set of standards was used to identify preliminary survey health needs: any poorly performing survey question; or at least 20%, 25%, 33%, 40%, 50%, 60%, 66%, 75%, or 80% of the associated survey questions were found to perform poorly

These sets of criteria (any mention, 20%, 25%, 33%, 40%, 50%, 60%, 66%, 75%, or 80%) were used because we could not anticipate which specific standard would be most meaningful within the context of the county. Having multiple objective decision criteria allows the process to be more easily described but still allows for enough flexibility to respond to evolving conditions in the county. To this end, a final round of expert reviews was used to compare the set selection criteria to find the level at which the criteria converged towards a final set of SHNs. Once the final criteria used to identify the SHN were selected for the interview and focus groups, survey, and secondary analyses, any PHN included in any preliminary health need list was included as a final significant health need for the county.

For this Nevada County report, A PHN was selected as a Preliminary Secondary Significant Health need only if 50% of the associated indicators were identified as performing poorly. A PHN was identified as a Preliminary Primary Significant Health Need only if it was mentioned by 50% or more of the sources as performing poorly.

Community Health Survey Results

In addition to quantitative secondary data and qualitative primary data being assigned to PHNs for SHN identification and prioritization, survey questions were also assigned to various SHNs for further examination of health needs. Survey results were not used in the determination of health needs. Table 27 displays how each survey question was assigned to a corresponding SHN, and whether or not the specific survey question was included in the health need description. Criteria for inclusion in the health needs descriptions included one of the following:

- Yes (results for the specific survey question exceeded benchmark rate and included in the health need description)
- No (survey results were better in the sample vs the benchmark)
- No (survey results were not included due to lacking a benchmark comparison for appropriate interpretation).

Table 27: Community Health Assessment Survey Assignments to SHNs

Question # in Nevada County CHA Survey	Question Content	Significant Health Need Assignment (SHNs 1-10)[30]	Included in the Health Need Profiles (based on comparison to state benchmark survey)
2	Would you say that in general your health is?	2, 3, 4	Yes
3	Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?	1,2,4,5	Yes
4	Now thinking about your mental health, which includes stress, depression, and problems with emotions or how many days during the past 30 days was your physical health not good?	3,10	No (results better in NV County sample vs state)
5	Do you have any kind of health care coverage, including health insurance from an employer or private, prepaid plans such as HMOs, or government plans such as Medicare, MediCal, or CHiP?	1,2,5,8(?)	No (lack benchmark comparison)
6	Do you have ONE person you think of as your personal doctor or health care provider?	1, 2, 4	No (lack benchmark comparison)
7	Which of the following BEST describes your relationship with your physician and your health care use:	2,4,5	No (lack benchmark comparison)
8	How confident do you feel when leaving the doctor's office that you understand what the doctor has told you:	2,3,4,5	No (lack benchmark comparison)
9	Has a lack of transportation kept you from getting to a doctor's office or to any other healthcare appointment during the PAST YEAR?	2,5,7	No (lack benchmark comparison)
10	During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?	6	No (lack benchmark comparison)
11	Have you ever been told by a doctor that you have diabetes?	2,4,5	No (lack benchmark comparison)

[30] 1. Access to basic needs such as housing, jobs and food, 2. Access to mental/behavioral/substance abuse services, 3. Access to quality primary care health services, 4. Injury and disease prevention and management, 5. Access to specialty and extended care, 6. Access and functional needs, 7. Active living and health eating, 8. Access to dental care and preventive services, 9. Pollution-free living environment, 10. Safe and violence-free environment

Question # in Nevada County CHA Survey	Question Content	Significant Health Need Assignment (SHNs 1-10)[30]	Included in the Health Need Profiles (based on comparison to state benchmark survey)
12	Has a doctor, nurse or other health professional EVER told you that you had...	2,4,5	No (lack benchmark comparison)
13	Has a doctor, nurse or other health professional EVER told you that your blood cholesterol is high?	2,4,5	No (lack benchmark comparison)
14	Has a doctor, nurse or other health professional EVER told you that you had high blood pressure?	2,4,5	No (results better in NV County sample vs state)
15	How long has it been since you last visited a dentist or a dental clinic for any reason?	8	No (lack benchmark comparison)
16	If you have not visited a dentist within the past year, what is the MAIN reason you have not visited the dentist?	8	No (lack benchmark comparison)
17	Do you have asthma?	4,9	Yes
18	Do you now smoke cigarettes every day, some days or not at all?	3,4,9	Yes
19	Do you currently use chewing tobacco, snuff, or snus every day, some days or not at all?	3,4,9	Yes
20	Electronic Cigarettes, or e-cigarettes as they are often called, are battery-operated devices that simulate smoking a cigarette, but do not involve the burning of tobacco. The heated vapor produced by an e-cigarette often contains nicotine. Have you ever used and electronic cigarette, even just one time in your life?	3,4,9	No (results better in Nevada County sample vs state)
21	Do you now use electronic cigarettes every day, some days or not at all?	3,4,9	No (results better in Nevada County sample vs state)
22	During the past 30 days, how many DAYS per WEEK did you have at least one drink of any alcoholic beverages?	4, 10	Yes
23	During the past 30 days, how many DAYS per MONTH did you have at least one drink of any alcoholic beverages?	4, 10	Yes
24	Considering all types of alcoholic beverages, how many times during the past 30 days did you have FIVE for men, FOUR for women or more drinks on an occasion?	4, 10	No (results better in Nevada County sample vs state)

Question # in Nevada County CHA Survey	Question Content	Significant Health Need Assignment (SHNs 1-10)[30]	Included in the Health Need Profiles (based on comparison to state benchmark survey)
25	The next two questions are about marijuana (aka cannabis, pot, grass, weed, etc.) and hashish. Marijuana is usually smoked or it is sometimes cooked in food. Hashish is a form of marijuana that is also called hash. It is usually smoked in a pipe. Another form of hashish is hash oil. Have you ever, even once, used marijuana or hashish?	3,4,9,10	No (lack benchmark comparison)
26	Think specifically about the past 30 days, from today up to and including today. During the past 30 days, on how many days did you use marijuana or hashish?	9,9,10	Yes
27	A flu shot is an influenza vaccine injected into your arm. During the past 12 months, have you had a seasonal flu shot?	1,2,4	Yes
28	Females only - A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?	2, 4, 5	No (results better in Nevada County sample vs state)
29	Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. Have you ever had either of these exams?	2, 4, 5	Yes
30	Have you EVER been told by a doctor, nurse or other health professional you had cancer?	2, 4, 5	Yes
31	Over the last 2 weeks, how many days have you:		No (lack benchmark comparison)
	- Felt bad about yourself or that you were a failure or had let yourself or your family down?	3	
	- Felt tire or had little energy?	3	
	- Had trouble falling asleep or staying asleep or sleeping too much?	3	
	- Felt down, depressed or hopeless	3, 4	
	- Had little interest or pleasure doing things?	3	

Question # in Nevada County CHA Survey	Question Content	Significant Health Need Assignment (SHNs 1-10)[30]	Included in the Health Need Profiles (based on comparison to state benchmark survey)
32	Has a doctor or other healthcare provider EVER told you that you have: An anxiety disorder (including acute stress disorder, anxiety, generalized anxiety disorder, OCD, panic disorder, phobia, PTSD, or social anxiety disorder)?	2,3,5,10	No (lack benchmark comparison)
33	Has a doctor or other healthcare provider EVER told you that you have: A depressive disorder (including depression, major depression, dysthymia, or minor depression)	2,3,4,5	Yes
34	During the past 12 months, have you received any treatment or counseling for any problem you were having with your emotions, nerves, or mental health? Please do not include treatment for alcohol or drug use.	3,4,5	No (lack benchmark comparison)
35	Not counting carrots, potatoes, or salad, how many SERVINGS of VEGETABLES did you eat during the PAST WEEK?	1, 4	No (lack benchmark comparison)
36	Do any of the following keep you and your family from eating more vegetables?	1, 6	No (lack benchmark comparison)
37	How many days in the past week did you purchase or receive food from the following sources?	1, 6	No (lack benchmark comparison)
38	Some people play the role of caregiver as part of their daily lives, which means they are responsible for meeting the physical and psychological needs of others. Do you act as a caregiver for another ADULT, such as spouse, sibling, aunt, uncle, parent or grandparent?	1, 4, 5, 7	Yes
39	Do you have :		NA
	- A living will?	NA	
	- An advanced directive related to healthcare treatment or not?	NA	
	- A power of attorney?	NA	
	- A health care proxy?	NA	
40	What do you think are the three biggest health problems in your community?		YES
	- Housing that is adequate, safe and affordable	1	

Question # in Nevada County CHA Survey	Question Content	Significant Health Need Assignment (SHNs 1-10)[30]	Included in the Health Need Profiles (based on comparison to state benchmark survey)
	- Mental health problems	7,5,3	
	- Access to health care	8,5,4,2	
	- Aging problems (arthritis, hearing loss, etc.)	7,5	
	- Poverty	6,1	
	- Cancers	6,5,2	
	- Dementia including Alzheimer's Disease	5,3,2	
	- Lack of nutritious foods/food insecurity or hunger	6,1	
	- Diabetes	6,5,4,2	
	- Dental problems	8	
	- Heart disease and stroke	6,5,4,2	
	- Domestic violence	10	
	- Climate change	9	
	- High blood pressure	6,5,4,2	
	- Motor vehicle crash injuries	4, 10	
	- Accident/unintentional injuries	10	
	- Child abuse/neglect	1	
	- Respiratory / lung disease	5,4,2	
	- Suicide	3	
	- Sexually transmitted diseases (STDs)	5,4	
	- Homicide	10	
	- Autism spectrum disorders	7,5	
	- Rape/sexual assault	10	
	- Infectious disease (e.g. Hepatitis, TB)	5,4	
	- Firearm-related injuries	10	
41	How healthy would you rate your community (the area where you live)?	NA	NA
42	There are adequate health and wellness activities in my community	NA	NA
43	There are adequate cultural events in my community	NA	NA
44	My community is good place to raise children	NA	NA
45	My community offers plenty of other educational/learning activities for children and youth.	NA	NA
46	My community is a good place to grow old	NA	NA

Question # in Nevada County CHA Survey	Question Content	Significant Health Need Assignment (SHNs 1-10)[30]	Included in the Health Need Profiles (based on comparison to state benchmark survey)
47	In order of priority, what do you think are the THREE most significant risky behaviors in your community?		Yes
	- Violence/bullying	10	
	- Unsafe sex	4	
	- Unhealthy weight	6	
	- Tobacco use	9	
	- Poor eating habits	6	
	- Not using seat belts and/or child safety seats	10	
	- Not using birth control	4	
	- Not getting shots to prevent disease	4	
	- Lack of exercise	6	
	- Drug abuse	10	
	- Dropping out of school	1	
	- Distracted driving/driving under the influence (legal or illegal substances)	10	
	- Binge drinking or alcohol abuse	6	
48	What do you think are the THREE most important factors for quality of life in a healthy community	NA	NA
49	Which describes your race/ethnicity? Please select just one..	NA	NA
50	Have any language, cultural barriers, or your immigration status kept you from seeking medical care in the past?	NA	NA
51	What is the highest education level you completed?	NA	NA
52	Are you currently employed?	NA	NA
53	Annual income?	NA	NA

NA = Not applicable refers to survey questions that were not directly mapped to a specific PHN

Health Need Prioritization

Once identified for the county, the final set of SHNs was prioritized. To reflect the voice of the community, significant health need prioritization was based solely on primary data. Key informants and focus-group participants were asked to identify the three most significant health needs in their communities. These responses were associated with one or more of the potential health needs. This, along with the responses across the rest of the interviews and focus groups, was used to derive two measures for each significant health need.

First, the total percentage of all primary data sources that mentioned themes associated with a significant health need at any point was calculated. This number was taken to represent how broadly a given significant health need was recognized within the community. Next, the percentage of times a theme associated with a significant health was mentioned as one of the top three health needs in the community was calculated. Since primary data sources were asked to prioritize health needs in this question, this number was taken to represent the intensity of the need.

These measures were next rescaled so that the SHN with the maximum value for each measure equaled one, the minimum equaled zero, and all other SHNs had values appropriately proportional to the maximum and minimum values. The rescaled values were then summed to create a combined SHN prioritization index. SHNs were ranked in descending order based on this index value so that the SHN with the highest value was identified as the highest priority health need, the SHN with the second highest value was identified as the second highest priority health need, and so on.

Detailed List of Resources to Address Health Needs for Nevada County

Table 28: Resource Potentially Available to Address Significant Health Needs Identified in the CHNA/CHA

Organization Information			Significant Health Need Med (X)									
Name	ZIP Code	Website	Access to Mental/ Behavioral/ Substance Abuse Services	Access to Quality Primary Care Health Services	Active Living and Healthy Eating	Safe and Violence-Free Environment	Access to Dental Care and Preventive Services	Pollution-Free Living Environment	Access to Basic Needs Such as Housing, Jobs, and Food	Access and Functional Needs	Access to Specialty and Extended Care	Injury and Disease Prevention and Management
Adult and Family Services Commission (AFSC) of Nevada County	95959	mynevadacounty.com		X		X			X		X	
Agency on Aging – Area 4	95815	agencyonaging4.org	X	X		X			X		X	X
Alliance for Workforce Development, Inc.	95949	afwd.org							X			
Alternatives Pregnancy Center	95825	alternativespc.org	X	X							X	
Alzheimer's Association	95815	alz.org/norcal	X								X	X
American Red Cross	95815	www.redcross.org/local/california/gold-country.html		X					X			
Anew Day	95959	anew-day.com	X									
Another Choice Another Chance	95823	acacsac.org	X									
Bear Yuba Land Trust	95949	bylt.org			X			X				
Big Brothers Big Sisters of Nevada County and North Lake Tahoe	96160	bigsofnc.org	X			X						

Organization Information			Significant Health Need Med (X)									
Name	ZIP Code	Website	Access to Mental/ Behavioral/ Substance Abuse Services	Access to Quality Primary Care Health Services	Active Living and Healthy Eating	Safe and Violence-Free Environment	Access to Dental Care and Preventive Services	Pollution-Free Living Environment	Access to Basic Needs Such as Housing, Jobs, and Food	Access and Functional Needs	Access to Specialty and Extended Care	Injury and Disease Prevention and Management
Booth Family Center	95945	(530) 272-2669							X			
Breathe California of Sacramento – Emigrant Trails	95814	sacbreathe.org		X				X				X
Cal Fresh – Market Match	95959	marketmatch.org			X				X			
California Forensic Medical Group	95945	cfmg.com	X	X								
Chapa-De Indian Health	95945	chapa-de.org	X	X	X		X					X
Charis Youth Center	95945	charisyouthcenter.org	X						X	X		
Child Advocates of Nevada County	95959	caofnc.org		X		X			X			
Child Protective Services	95949	mynevadacounty.com	X	X		X			X			
Clinical CareForce	95678	californiacareforce.org		X			X					
Coalition for a Drug-Free Nevada County	95945	drugfreenevadacounty.org				X						X
Common Goals Inc.	95945	wp.commongoalsinc.org	X									
Community Beyond Violence (Domestic Violence Sexual Assault Coalition)	95949	cbv.org	X			X			X			

Organization Information			Significant Health Need Med (X)									
Name	ZIP Code	Website	Access to Mental/ Behavioral/ Substance Abuse Services	Access to Quality Primary Care Health Services	Active Living and Healthy Eating	Safe and Violence-Free Environ-ment	Access to Dental Care and Preventive Services	Pollution-Free Living Environ-ment	Access to Basic Needs Such as Housing, Jobs, and Food	Access and Func-tional Needs	Access to Specialty and Extended Care	Injury and Disease Preven-tion and Manage-ment
Community Collaborative of Tahoe Truckee (CCTT)	96161	ttcf.net/community-collaborative/							X			
Community Recovery Resource Center (CoRR)	95945	corr.us	X									
Community Support Network of Nevada County (CSNNC)	95959	csnnc.org	X	X	X				X			
Connecting Point	95945	connectingpoint.org	X						X	X		
Del Oro Caregiver Resource Center	95610	deloro.org	X	X							X	X
Eskaton	95608	eskaton.org/village-carmichael.html	X	X	X	X			X		X	
Falls Prevention Coalition of Nevada County	95945	(530) 274-6739										X
Families Now (Mission Focused Solutions)	95945	familiesnow.org				X			X			
Family Resource Center of Truckee	96161	truckeefrc.org		X					X			
First 5 Nevada	95959	first5nevco.org	X	X	X				X			
Food Bank of Nevada County	95945	foodbankofnc.org			X				X			
FREED Center for Independent	95945	freed.org		X					X			

Organization Information			Significant Health Need Med (X)									
Name	ZIP Code	Website	Access to Mental/ Behavioral/ Substance Abuse Services	Access to Quality Primary Care Health Services	Active Living and Healthy Eating	Safe and Violence-Free Environ-ment	Access to Dental Care and Preventive Services	Pollution -Free Living Environ-ment	Access to Basic Needs Such as Housing, Jobs, and Food	Access and Func-tional Needs	Access to Specialty and Extended Care	Injury and Disease Preven-tion and Manage-ment
Gender Health Center	95817	thegenderhealthcenter.org	X	X		X			X			
Gold Country Community Services	95945	goldcountryservices.org			X				X			
Goodwill – Sacramento Valley	95776	goodwillsacto.org							X			
Grass Valley Police Department	95945	gvpd.net				X						
Grass Valley Seventh-Day Adventist Church	95945	gvadventist.com							X			
Helping Hands Nurturing Center	95945	helpinghandsnurturingcenter.org	X			X			X			
Hospice of the Foothills	95945	hospiceofthefoothills.org		X		X			X		X	
Hospitality House	95945	hhshelter.org	X	X		X			X			
Interfaith Food Ministries	95945	interfaithfoodministry.org							X			
KARE Crisis Nursery, Inc.	95959	karecrisisnursry.org				X			X			
Legal Services of Northern California – Health Rights	95814	lsnc.net							X			
Lilliput Children's Services	96150	lilliput.org							X			

Organization Information			Significant Health Need Med (X)									
Name	ZIP Code	Website	Access to Mental/ Behavioral/ Substance Abuse Services	Access to Quality Primary Care Health Services	Active Living and Healthy Eating	Safe and Violence-Free Environ-ment	Access to Dental Care and Preventive Services	Pollution-Free Living Environ-ment	Access to Basic Needs Such as Housing, Jobs, and Food	Access and Func-tional Needs	Access to Specialty and Extended Care	Injury and Disease Preven-tion and Manage-ment
Living Well Medical Clinic	95945	livingwellmedicalclinic.com	X									X
Mercy Housing	95838	mercyhousing.org							X			
Mountain Valley Child and Family Services	95959	mountainvalleyfamilyservices.net	X						X			
NAMI (National Association of Mental Illness)	95945	naminevadacounty.org	X									
NEO Youth Center	95945	ncneo.org/youth-center			X	X						X
Nevada City Methodist	95959	nevadacitymethodist.com							X			
Nevada City School District – Wellness Program	95959	ncsd.school	X		X							X
Nevada County 2-1-1 Community Services Central	95945	211connectingpoint.org							X	X		
Nevada County Behavioral Health	95945	mynevadacounty.com	X			X						X
Nevada County Consolidated Fire	95959	nccfire.com		X		X						
Nevada County Corrections	95945	mynevadacounty.com	X	X					X			

Organization Information			Significant Health Need Med (X)									
Name	ZIP Code	Website	Access to Mental/ Behavioral/ Substance Abuse Services	Access to Quality Primary Care Health Services	Active Living and Healthy Eating	Safe and Violence-Free Environ-ment	Access to Dental Care and Preventive Services	Pollution-Free Living Environ-ment	Access to Basic Needs Such as Housing, Jobs, and Food	Access and Func-tional Needs	Access to Specialty and Extended Care	Injury and Disease Preven-tion and Manage-ment
Nevada County Health and Human Services Agency	95945	mynevadacounty.com	X	X	X	X	X	X	X	X	X	X
Nevada County Local One Stop Business and Career Network	95959	nevadacitychamber.com/nevada-countys-local-one-stop-business-career-network/							X			
Nevada County Probation	95959	mynevadacounty.com				X						
Nevada County Superintendent of Schools	95945	nevco.org	X	X	X	X			X			
Nevada County WIC	95945	mynevadacounty.com		X	X				X			
Nevada County Youth Probation	95959	mynevadacounty.com				X						
North Columbia Schoolhouse Cultural Center	95959	northcolumbiaschoolhouse.org							X			
North San Juan Community Church	95960	nsjcommchurch.org							X			
North San Juan Volunteer Fire Department	95960	nsjfire.org		X		X			X			
North Tahoe Family Resource Center	96143	northtahoefrc.org			X							

Organization Information			Significant Health Need Med (X)									
Name	ZIP Code	Website	Access to Mental/ Behavioral/ Substance Abuse Services	Access to Quality Primary Care Health Services	Active Living and Healthy Eating	Safe and Violence-Free Environ-ment	Access to Dental Care and Preventive Services	Pollution-Free Living Environ-ment	Access to Basic Needs Such as Housing, Jobs, and Food	Access and Func-tional Needs	Access to Specialty and Extended Care	Injury and Disease Preven-tion and Manage-ment
Nutrition Education and Obesity Prevention Program (NEOP)	95945	mynevadacounty.com			X							
PARTNERS Family Resource Centers	95945	partnersfamilyresourcecenters.org			X	X			X			
Partners in English Language Learning (PiELL)	95959	piell.org							X			
PFLAG	95949	pflag.org/chapter/pflag-grass-valleynevada-city				X			X			
Placer-Nevada County Medical Society – Opioid Safety Coalition	95677	pncms.org	X									X
PRIDE Industries	95747	prideindustries.com							X			
Rotary Club of Nevada City	95959	nevadacityrotary.org							X			
San Juan Ridge Family Resource Center	95960	sanjuanridgefrc.org			X	X			X			
School of Care	95945	wolfcreekcarecenter/ wolf-creek-school-of-care/							X			X
Shingle Springs Tribal TANF Program	95825	shinglespringsrancher							X			

Organization Information			Significant Health Need Med (X)									
Name	ZIP Code	Website	Access to Mental/ Behavioral/ Substance Abuse Services	Access to Quality Primary Care Health Services	Active Living and Healthy Eating	Safe and Violence-Free Environ-ment	Access to Dental Care and Preventive Services	Pollution-Free Living Environ-ment	Access to Basic Needs Such as Housing, Jobs, and Food	Access and Func-tional Needs	Access to Specialty and Extended Care	Injury and Disease Preven-tion and Manage-ment
		ia.com/tanf/										
Shriner's Hospital for Children – Northern California	95817	shrinershospitalforchildren.org/sacramento		X							X	
Sierra College Counseling	96161	sierracollege.edu/student-services/counseling/	X						X			
Sierra Family Medical Clinic	95959	sierraclinic.org	X	X	X		X					X
Sierra Foothills AIDS Foundation	95602	sierrafoothillsaids.org		X					X			X
Sierra Harvest	95959	sierraharvest.org				X						
Sierra Mental Wellness	96145	sierramentalwellness.org	X									
Sierra Nevada Children's Services	95945	sncs.org	X	X	X	X			X			
Sierra Nevada Memorial Hospital	95945	dignityhealth.org		X							X	X
Sierra Roots	95959	sierraroots.org			X				X			
Sierra Senior Services	96161	Sierraseniors.org			X				X			
Sierra Services for the Blind	95959	sierraservices.org	X							X		

Organization Information			Significant Health Need Med (X)										
Name	ZIP Code	Website	Access to Mental/ Behavioral/ Substance Abuse Services	Access to Quality Primary Care Health Services	Active Living and Healthy Eating	Safe and Violence-Free Environ-ment	Access to Dental Care and Preventive Services	Pollution-Free Living Environ-ment	Access to Basic Needs Such as Housing, Jobs, and Food	Access and Func-tional Needs	Access to Specialty and Extended Care	Injury and Disease Preven-tion and Manage-ment
Spirit Peer Empowerment Center	95945	spiritpeerempowermentcenter.org	X						X			
The Center for the Arts	95945	thecenterforthearts.com							X			
The Church of Jesus Christ of Latter-day Saints	95959	lds.org							X			
The Clinic!	95945	citizensforchoice.org		X								
The Friendship Club	95959	friendshipclub.org				X			X			
The Gateway Mountain Center	96161	sierraexperience.org	X		X							
The Keaton Raphael Memorial	95661	childcancer.org										X
The Mental Health Association in California	95814	mhac.org	X									
The Salvation Army – Del Oro Division	95834	deloro.salvationarmy.org	X	X					X			
The Unity Gold Spiritual Center	95945	unitygold.us							X			
Tobacco Use Prevention Education (TUBE)	95945	nevco.org/ programs-services/tube/										X
Truckee Teen Clinic	96161	mynevadacounty.com		X								X

Organization Information			Significant Health Need Med (X)									
Name	ZIP Code	Website	Access to Mental/ Behavioral/ Substance Abuse Services	Access to Quality Primary Care Health Services	Active Living and Healthy Eating	Safe and Violence-Free Environ-ment	Access to Dental Care and Preventive Services	Pollution-Free Living Environ-ment	Access to Basic Needs Such as Housing, Jobs, and Food	Access and Func-tional Needs	Access to Specialty and Extended Care	Injury and Disease Preven-tion and Manage-ment
		/591/teen-clinics										
Turning Point Community Programs	95670	tpcp.org	X						X			
Twin Cities Church	95945	twincities.church							X			
University of California, Davis	95616	ucdavis.edu							X			
VA Northern California Health Care System	95655	northerncalifornia.va.gov	X	X					X			
Volunteers of America – Northern California & Northern Nevada	95821	voa-ncnn.org	X						X			
WarmLine Family Resource Center	95818	warmlinefrc.org	X	X					X			
Western Sierra Medical Clinic	95945	wsmcmed.org	X	X	X		X					X
Willow Springs	95960	willowspringsnsj.org			X							
Woman of Worth	95959	women-of-worth.org	X			X			X			
YMCA of Superior California	95845	ymcasuperiorcal.org			X	X						

Limits and Information Gaps

Study limitations included challenges in obtaining secondary quantitative data and assuring community representation via primary data collection. For example, most of the data used in this assessment were not available by race or ethnicity. The timeliness of the data also presented a challenge, as some of the data were collected in different years; however, this is clearly noted in the report to allow for proper comparison.

As always with primary data collection, gaining access to participants that best represented the populations needed for this assessment was a challenge. This was increasing difficult in the rural areas of the county identified as Communities of Concern, and especially difficult in the Truckee area. In addition, though efforts were made to insure adequate sample size of the countywide survey, the survey was administered via convenience sample by the multiple partners of the project. Convenience sampling limits generalizability of the survey findings. In addition, all primary data are self-reported data, which has inherent limitations in accuracy.

An effort was made to verify all resources (assets) collected in the 2016 hospital partner CHNAs via web search, to add any additional resources identified during primary data collection, and to add any other resources identified as part of the partnership work in Nevada County. Ultimately some resources may not be listed that exist in the county to address the SHNs.

Appendix A: CHNA/CHA Data Collection Instruments

Key Informant Interview Guide

1) BACKGROUND
   a) Tell me about your current role and the organization you work for?
   b) How would you define the community (ies) you serve or live in?
      i) Consider:
         (1) Specific geographic areas?
         (2) Specific populations served?
            (a) *Who? Where? Racial/ethnic make-up, physical environment (urban/ rural, large/small*
2) HEALTH ISSUES
   a) What are the biggest health needs in the community?
      i) *INSERT MAP exercise: Please use this map to help our team understand where communities that experience health burdens live?*
         (1) Consider:
            (a) What specific geographic locations struggle with health issues the most?
            (b) What specific groups of community members experience health issues the most?
   b) What historical/societal influences have occurred since the last assessment (2015-16) that should be taken into consideration around health needs?
3) CHALLENGES/BARRIERS
   a) What are the challenges (barriers) to being healthy for the community?
      i) Consider: Health Behaviors; (2) Social factors; (3) Economic factors; (4) Clinical Care factors; (5) Physical (Built) environment
4) SOLUTIONS
   a) What solutions will address the health needs and or challenges mentioned?
         (1) Consider: Health Behaviors; (2) Social factors; (3) Economic factors; (4) Clinical Care factors; (5) Physical (Built) environment
5) PRIORITY: Based on what we have discussed so far, what are currently the most important or urgent top 3 health issues or challenges to address in order to improve the health of the community?
6) RESOURCES
   a) What resources exist in the community to help people live healthy lives?
      i) Consider:
         (1) Barriers to accessing these resources.
         (2) New resources that have been created since 2016
         (3) New partnerships/projects/funding
7) What other people, groups or organizations would you recommend we speak to about the health of the community?
      i) Name 3 types of service providers that you would suggest we include in this work?
      ii) Name 3 types of community members that you would recommend we speak to in this work?
8) OPEN: Is there anything else you would like to share with our team about the health of the community?

Focus Group Interview Guide

1. **BACKGROUND**
   a. Where in the county (HSA) do you live?
      i. Specific town? General area?
   b. How would you describe the community (ies) you live in using a few words?
      i. Probe for:
         1. Specific geographic areas?
         2. Specific populations served?
            1. *Who? Where? Racial/ethnic make-up, physical environment (urban/ rural, large/small*
2. **HEALTH ISSUES**
   a. What are the biggest health needs in the community that you live?
      i. *INSERT MAP exercise: Please use this map to help our team understand where communities that experience health burdens live?*
         1. Probe for:
            1. What specific geographic locations struggle with health issues the most?
            2. What specific groups of community members experience health issues the most?
3. **CHALLENGES/BARRIERS**
   a. What are the challenges (barriers) to being healthy for the community you live in?
   (1) Probe for: Health Behaviors; (2) Social factors; (3) Economic factors; (4) Clinical Care factors; (5) Physical (Built) environment
4. **SOLUTIONS**
   a. What solutions do you think are needed to address the health needs and or challenges mentioned previously?
   (2) Probe for: Health Behaviors; (2) Social factors; (3) Economic factors; (4) Clinical Care factors; (5) Physical (Built) environment
5. **PRIORITY: Based on what we have discussed so far, what are currently the most important or urgent top 3 health issues or challenges to address in order to improve the health of the community you live in?**
6. **RESOURCES**
   a. What resources exist in your community to help people live healthy lives?
      i. Probe for:
         1. Barriers to accessing these resources.
         2. New resources that have been created since 2016
         3. New partnerships/projects/funding

7. **OPEN: Is there anything else you would like to share with our team about the health of the community?**

Nevada County Public Health Department – 2018
Community Health Assessment Survey

Greetings!

The Nevada County Public Health Department and Dignity Health are partnering to conduct a community health assessment. Our goal is to have a deeper understanding of what issues residents feel are important, how quality of life is perceived in our various communities, and what community assets we have already that can be used to improve community health.

We are asking our community members to complete this survey. The questions are about quality of life, health care, exercise, children, social support, community health, and risk behaviors in the community. In addition, we gather some basic demographic information which helps us understand what matters to the different individuals and communities completing the survey.

You qualify to complete this survey if you are a) a resident of Nevada County, and b) if you are 18 years of age or older, or if you are under 18, then your parent or guardian is aware that you are taking this survey.

With every 50 completed surveys we receive, we offer an option to be entered into a drawing for your choice of one of three prizes:

- $25 gift certificate to Safeway
- $25 Amazon.com gift card
- $25 gift certificate to The Book Seller

Award winners will be selected and notified as the drawings occur.

Any questions please contact: Holly Whittaker, MS, Epidemiologist, at 530.470.2658 or via email at holly.whittaker@co.nevada.ca.us or by mail, Nevada County Public Health Department, 500 Crown Point Circle, Grass Valley, CA 95945. Results can be scanned and returned to the email address above.

Your answers to the questions below will impact decisions about the health of our communities. Please answer each question to the best of your ability.

* 1. What is your zip Code

2. Would you say that in general your health is:

○ Excellent   ○ Fair

○ Very Good   ○ Poor

○ Good

3. Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

None   1 or more   Don't know, not sure

4. Now thinking about your mental health, which includes stress, depression, and problems with emotions or how many days during the past 30 days was your mental health NOT good?

None   1 or More   Don't Know, Not Sure

5. Do you have any kind of health care coverage, including health insurance from an employer or private, prepaid plans such as HMOs, or government plans such as Medicare, MediCal, or CHIP?

Yes   No health insurance coverage

6. Do you have ONE person you think of as your personal doctor or health care provider?

Yes, only one   Yes, more than one   No personal doctor

7. Which of the following BEST describes your relationship with your physician and your health care use:

○ I have a chronic health conditional and require frequent care   ○ I never use the health care system

○ I use health care mostly for preventive check-ups and health monitoring   Don't know

I seek out health care ONLY when I'm sick or injured

8. How confident do you feel when leaving the doctor's office that you understand what the doctor has told you:

○ Extremely confident   ○ A little bit

○ Quite a bit   ○ Not at all confident

○ Somewhat   ○ Do not know

9. Has a lack of transportation kept you from getting to a doctor's office or to any other health care appointment during the PAST YEAR?

○ Yes   ○ No   ○ Don't know

10. During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

○ Yes   ○ No

11. Have you ever been told by a doctor that you have diabetes?

○ Yes   ○ No

12. Has a doctor, nurse, or other health professional EVER told you that you had...

	YES	No
A heart attack, also called a myocardial infarction?	○	○
Angina or coronary heart disease?	○	○
A stroke?	○	○
Chronic obstructive pulmonary disease, emphysema, or chronic bronchitis?	○	○

13. Has a doctor, nurse or other health professional EVER told you that your blood cholesterol is high?

○ Yes   ○ No   ○ Don't Know

14. Has a doctor, nurse, or other health professional EVER told you that you had high blood pressure?

○ Yes   ○ No   ○ Do not know

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15. How long has it been since you last visited a dentist or a dental clinic for any reason?

○ Within the past year (anytime less than 12 months ago)

○ 5 or more years ago

○ Within the past 2 years (1 year ago but less than 2 years ago)

○ Never

○ Within the past 5 years (2 years ago but less than 5 years ago)

16. If you have not visited a dentist within the past year, what is the MAIN reason you have NOT visited the dentist.

[   ]

17. Do you have asthma?

○ Yes ○ No

18. Do you now smoke cigarettes every day, some days or not at all?

○ Every day ○ Some days ○ Not at all

19. Do you currently use chewing tobacco, snuff, or snus every day, some days or not at all?

○ Every day ○ Some days ○ Not at all

20. Electronic Cigarettes, or e-cigarettes as they are often called, are battery-operated devices that simulate smoking a cigarette, but do not involve the burning of tobacco. The heated vapor produced by an e-cigarette often contains nicotine. Have you ever used an electronic cigarette, even just one time in your life?

○ Yes ○ No

21. Do you now use electronic cigarettes every day, some days, or not at all?

○ Every day ○ Some days ○ Not at all

22. During the past 30 days, how many DAYS per WEEK did you have at least one drink of any alcoholic beverage? Please fill in number of days.

○ 0 days   ○ 3 days   ○ 6 days

○ 1 day   ○ 4 days   ○ 7 days

○ 2 days   ○ 5 days

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23. During the past 30 days, how many DAYS per MONTH did you have at least one drink of any alcoholic beverage?

○ None
○ 1-3 days
○ 4-6 days
○ 7-9 days

○ 10-15 days
○ 16-20 days
○ 21-25 days
○ 26 or more days

24. Considering all types of alcoholic beverages, how many times during the past 30 days did you have FIVE for men, FOUR for women or more drinks on an occasion?

○ 0-1 times   ○ 2-4 times   ○ 5 or more times

25. The next two questions are about marijuana (aka cannabis, pot, grass, weed, etc.) and hashish. Marijuana is usually smoked or it is sometimes cooked in food. Hashish is a form of marijuana that is also called "hash". It is usually smoked in a pipe. Another form of hashish is hash oil.
Have you ever, even once, used marijuana or hashish?

○ Yes ○ No ○ Don't know, not sure

26. Think specifically about the past 30 days, from today up to and including today. During the past 30 days, on how many days did you use marijuana or hashish?

○ None
○ 1-3 days
○ 4-6 days
○ 7-9 days

○ 10-15 days
○ 16-20 days
○ 21-25 days
○ 26 or more days

27. A flu shot is an influenza vaccine injected into your arm. During the past 12 months, have you had a seasonal flu shot?

○ Yes ○ No ○ Don't know, not sure

28. Females only - A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?

○ Yes ○ No

29. Sigmoidoscopy and colonoscopy are exams in which a tube is inserted in the rectum to view the colon for signs of cancer or other health problems. Have you ever had either of these exams?

○ Yes ○ No

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30. Have you EVER been told by a doctor, nurse, or other health professional you had cancer?

○ Yes ○ No

31. When answering the next 3 questions, please think about how many days each of the following has occurred in the past two weeks. Over the last 2 weeks, how many days have you:
(Responses are following – none, 1-3 days, 4-6 days, 7-9 days, 10-12 days, 13-14 days, Do not know)

	None	1-3 days	4-6 days	7-9 days	10-12 days	13-14 days	Do not Know
Had little interest or pleasure doing things?	○	○	○	○	○	○	○
Felt down, depressed or hopeless?	○	○	○	○	○	○	○
Had trouble falling asleep or staying asleep or sleeping too much?	○	○	○	○	○	○	○
Felt tired or had little energy?	○	○	○	○	○	○	○
Felt bad about yourself or that you were a failure or had let yourself or your family down?	○	○	○	○	○	○	○

32. Has a doctor or other healthcare provider EVER told you that you have:
An anxiety disorder (including acute stress disorder, anxiety, generalized anxiety disorder, OCD, panic disorder, phobia, PTSD, or social anxiety disorder)?

○ Yes ○ No

33. Has a doctor or other healthcare provider EVER told you that you have:
A depressive disorder (including depression, major depression, dysthemia, or minor depression

○ Yes ○ No

34. During the past 12 months, have you received any treatment or counseling for any problem you were having with your emotions, nerves or mental health? Please do not include treatment for alcohol or drug use.

○ Yes ○ No

35. Not counting carrots, potatoes, or salad, how many SERVINGS of VEGETABLES did you eat during the PAST WEEK? Example: a serving of vegetables at both lunch and dinner would be two servings.

○ None   ○ 5-7 times
○ 1-2 times   ○ 8 or more servings
○ 3-4 times   ○ Never eat/drink item/don't know

6

36. Do any of the following keep you and your family from eating more vegetables?

	Yes	No
Does the COST keep you from eating more vegetables?	○	○
Does NOT HAVING TIME TO COOK keep you from eating more vegetables?	○	○
Does NOT KNOWING HOW TO PREPARE THEM keep you from eating more vegetables?	○	○

37. How many days in the past week did you purchase or receive food from the following sources? (none, 1 day, 2 days, 3 days, 4 days, 5 or more days)

	none	1 day	2 days	3 days	4 days	5 or more days
A Senior Center or Food Pantry?	○	○	○	○	○	○
A Wal Mart, Target, KMart or other big box store?	○	○	○	○	○	○
A convenience store or corner store?	○	○	○	○	○	○
A Farmer's Market?	○	○	○	○	○	○
A grocery store such as Grocery Outlet, Safeway, Raleys?	○	○	○	○	○	○
A fast food or chain restaurant?	○	○	○	○	○	○

38. Some people play the role of caregiver as part of their daily lives, which means they are responsible for meeting the physical and psychological needs of others. Do you act as a caregiver for another ADULT, such as spouse, sibling, aunt, uncle, parent or grandparent?

○ Yes ○ No

7

39. Do you have any of the following legal documents that are used in end-of-life situation? Do you have:

	Yes	No	Don't Know, Not Sure
A living will?	○	○	○
An advanced directive related to healthcare treatment or not?	○	○	○
A power of attorney?	○	○	○
A health care proxy?	○	○	○

" 40. What do you think are the three biggest "health problems" in your community? (Please check NO MORE THAN THREE)

- [ ] Access to health care
- [ ] Accident / unintentional injuries
- [ ] Aging problems (arthritis, hearing loss, etc.)
- [ ] Autism spectrum disorders
- [ ] Cancers
- [ ] Child abuse / neglect
- [ ] Climate change
- [ ] Dementia including Alzheimer's Disease
- [ ] Dental problems

- [ ] Diabetes
- [ ] Domestic violence
- [ ] Firearm-related injuries
- [ ] Heart disease and stroke
- [ ] High blood pressure
- [ ] Homicide
- [ ] Housing that is adequate, safe and affordable
- [ ] Infant death
- [ ] Infectious disease (e.g. Hepatitis, TB)

- [ ] Lack of nutritious foods/food insecurity or hunger
- [ ] Mental health problems
- [ ] Motor vehicle crash injuries
- [ ] Poverty
- [ ] Rape/sexual assault
- [ ] Respiratory / lung disease
- [ ] Sexually transmitted diseases (STDs)
- [ ] Suicide

41. How healthy would you rate your community (the area where you live)?

○ Healthy ○ Neutral ○ Unhealthy ○ Not Sure

42. There are adequate health and wellness activities in my community.

○ Agree ○ Neutral ○ Disagree ○ Not Sure

43. There are adequate cultural events in my community

○ Agree ○ Neutral ○ Disagree ○ Not Sure

44. My community is good place to raise children

○ Agree ○ Neutral ○ Disagree ○ Not Sure

8

45. My community offers plenty of other educational/learning activities for children and youth.

◯ Agree ◯ Neutral ◯ Disagree ◯ Not Sure

46. My community is a good place to grow old.

◯ Agree ◯ Neutral ◯ Disagree ◯ Not Sure

" 47. In order of priority, what do you think are the THREE most significant "risky behaviors" in your community?
(Check only one behavior for each column)

	#1 - Top Priority, most significant behavior risk	#2 - Second Priority, next highest behavior risk	#3 - Third Priority, after #2, next highest behavior risk
Binge drinking or alcohol abuse	◯	◯	◯
Distracted driving/Driving under the influence (legal or illegal substances)	◯	◯	◯
Dropping out of school	◯	◯	◯
Drug abuse	◯	◯	◯
Lack of exercise	◯	◯	◯
Not getting "shots" to prevent disease	◯	◯	◯
Not using birth control	◯	◯	◯
Not using seat belts and/or child safety seats	◯	◯	◯
Poor eating habits	◯	◯	◯
Tobacco use	◯	◯	◯
Unhealthy weight	◯	◯	◯
Unsafe sex	◯	◯	◯
Violence/bullying			

9

* 48. What do you think are the THREE most important factors for quality of life in a "healthy community"? PLEASE CHECK NO MORE THAN THREE.

- [ ] Access to health care (e.g. family doctor, dentist)
- [ ] Access to healthy foods
- [ ] Affordable housing
- [ ] Arts and cultural events
- [ ] Clean environment
- [ ] Good jobs and healthy economy

- [ ] Good place to raise children
- [ ] Good schools
- [ ] Healthy behaviors and lifestyles, e.g., healthy nutrition choices and physical activity
- [ ] Low adult death and disease rates
- [ ] Low infant deaths
- [ ] Low levels of child abuse

- [ ] Parks and recreation
- [ ] Religious or spiritual values
- [ ] Strong family life
- [ ] Strong social ties
- [ ] Transportation

- [ ] Other (please specify)

_____

49. Which describes your race/ethnicity? Please select just one.

- ( ) American Indian, not Hispanic or Latino
- ( ) Asian, not Hispanic or Latino
- ( ) Black, not Hispanic or Latino
- ( ) Hispanic or Latino

- ( ) Native Hawaiian and other Pacific Islander, Not Hispanic or Latino
- ( ) White, not Hispanic or Latino
- ( ) Multi-Race, not Hispanic or Latino
- ( ) Some Other Race Alone, Not Hispanic or Latino

50. Have any language, cultural barriers, or your immigration status kept you from seeking medical care in the past year?

- ( ) Yes
- ( ) No

51. What is the highest education level you completed?

- ( ) Less than 9th grade
- ( ) 9th to 12th grade, no diploma
- ( ) High school graduate (includes equivalency)
- ( ) Some college, no degree

- ( ) Associate's degree
- ( ) Bachelor's degree
- ( ) Graduate or professional degree

10

52. Are you currently

○ Employed for

wages ○ Self

employed

○ Out of work for MORE then one

○ year Out of work for LESS then one

 year

○ A homemaker (stay at home parent/guardian)

○ A student

○ Retired

○ Unable to work

53. Annual Income...

○ Under $10,000

○ $10,000-25,000

○ $26,000-

35,000

○ $36,000-50,000

○ $51,000-75,000

○ $76,000-

100,000

○ Over $100,000

○ Don't know, not sure

54. Thank you for taking the time to complete this survey. Please add any additional comments about the health of your community or yourself.

OPTIONAL – In appreciation for those taking the time to answer this survey we are randomly selecting individuals to win a prize every time we receive another 50 completed surveys. If you would like to be entered, please complete the following.

Note: The information you provide to be eligible for a prize <u>will not be</u> linked to your survey answers.

Would you like to be entered to win a prize?

No

Yes

If yes, please provide the following information so we can contact you if you win.

Name: _____

Phone:_____(best number to reach you)

Email:_____

Appendix B: Nevada County Community Health Assessment Survey Results – 2018

Nevada County - Community Health County Survey Responses

Question 1

What is your zip Code

Zip Code	Percentage
95602	2.4%
95603	0.2%
95712	1%
95924	0.2%
95945	40.7%
95946	4.6%
95949	15.5%
95959	24.9%
95960	3.4%
95975	1%
95977	0.5%
95986	1.2%
96160	0.2%
96161	4.1%

Total Responses = 413
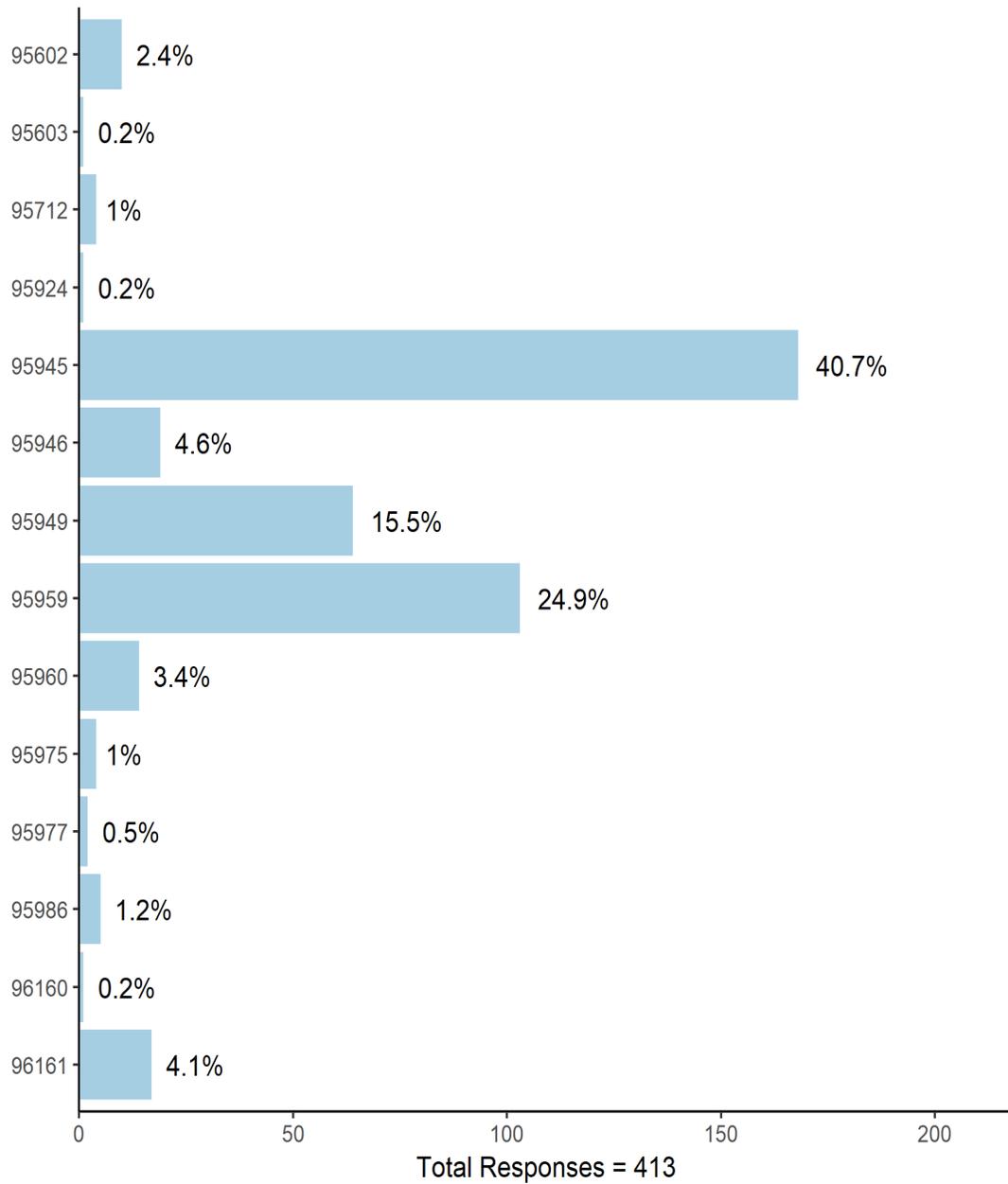
Response	Count	Percent
95602	10	2.4%
95603	1	0.2%
95712	4	1%
95924	1	0.2%
95945	168	40.7%
95946	19	4.6%
95949	64	15.5%
95959	103	24.9%
95960	14	3.4%
95975	4	1%
95977	2	0.5%
95986	5	1.2%
96160	1	0.2%
96161	17	4.1%
Total Responses	413	

Question 2

Would you say that in general your health is:

Excellent — 11.2%

Very Good — 39.9%

Good — 31.9%

Fair — 13.9%

Poor — 3.2%

Total Responses = 411
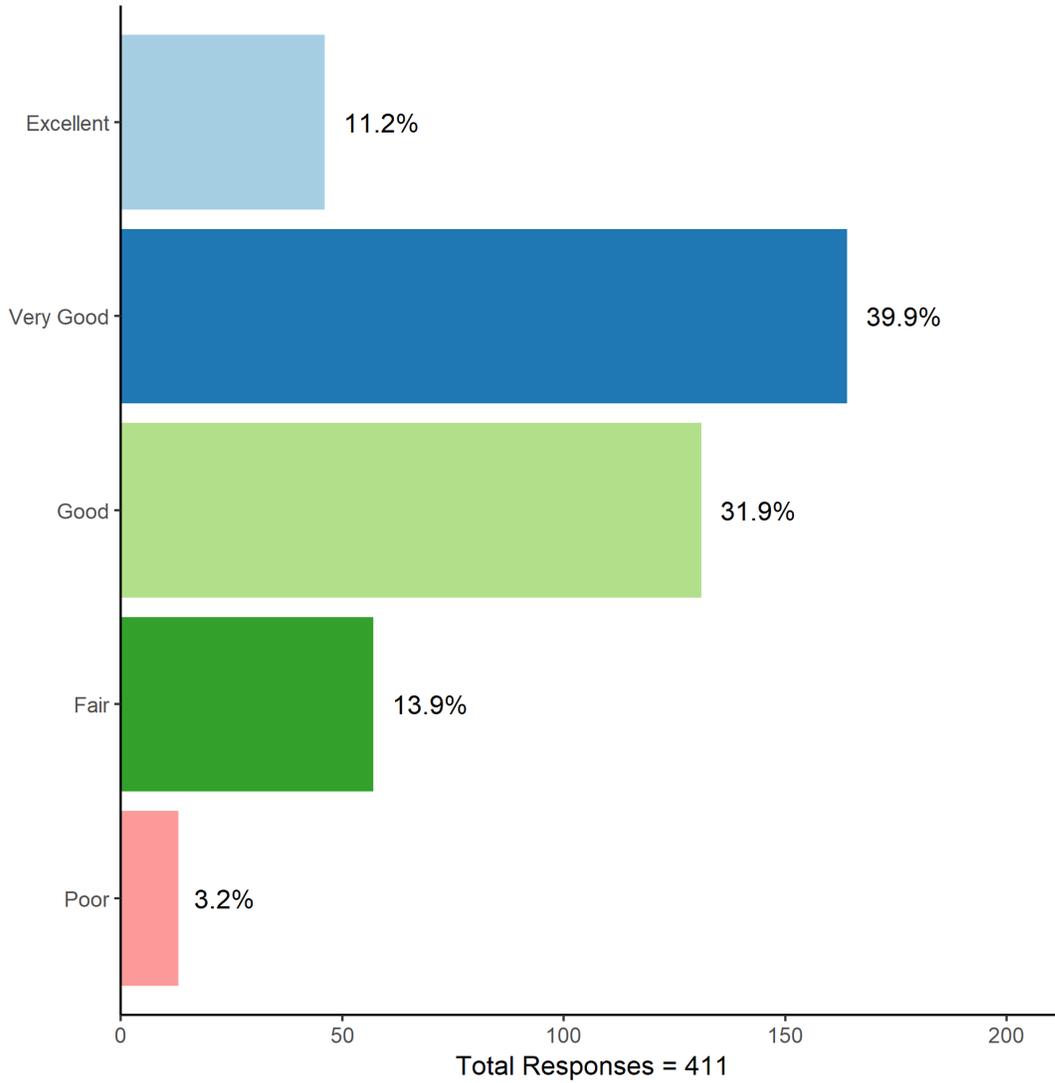
Response	Count	Percent
Excellent	46	11.2%
Very Good	164	39.9%
Good	131	31.9%
Fair	57	13.9%
Poor	13	3.2%
Total Responses	411	

Question 3

Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health not good?

Total Responses = 411
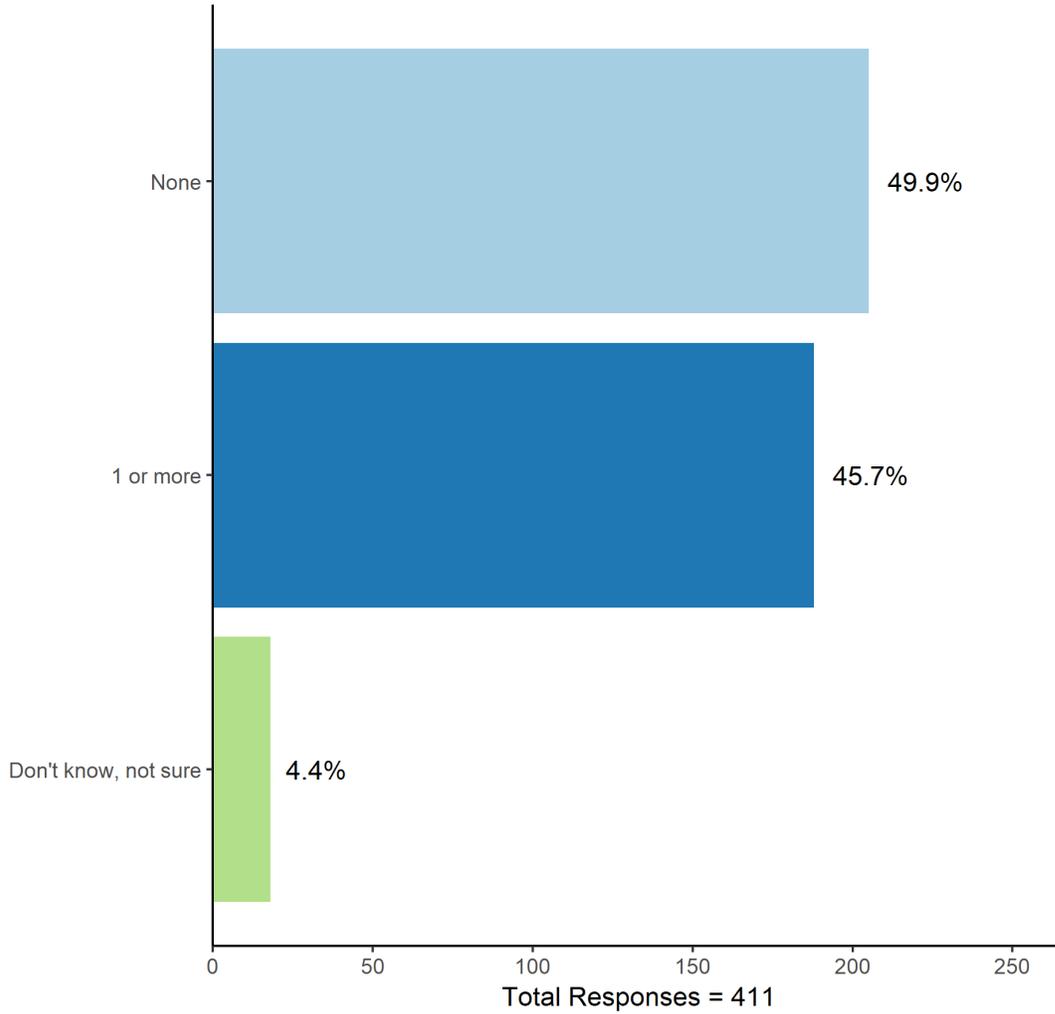
Response	Count	Percent
None	205	49.9%
1 or more	188	45.7%
Don't know, not sure	18	4.4%
Total Responses	411	

Question 4

Now thinking about your mental health, which includes stress, depression, and problems with emotions or how many days during the past 30 days was your mental health NOT good?

None ┤ 100%

1 or more ┤ 0%

Don't know, not sure ┤ 0%

0   50   100   150   200

Total Responses = 181
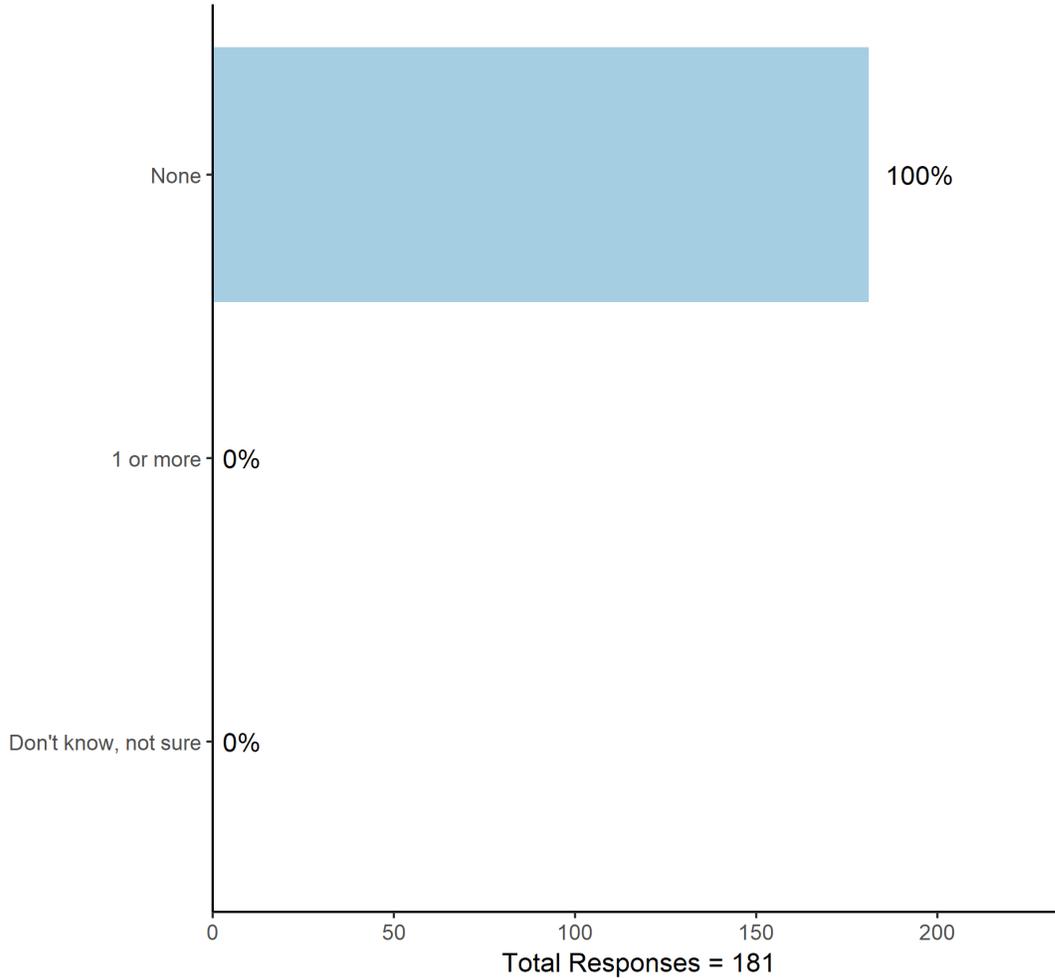
Response	Count	Percent
None	181	100%
1 or more	0	0%
Don't know, not sure	0	0%
Total Responses	181	

Question 5

Do you have any kind of health care coverage, including health insurance from an employer or private, prepaid plans such as HMOs, or government plans such as Medicare, MediCal, or CHIP?
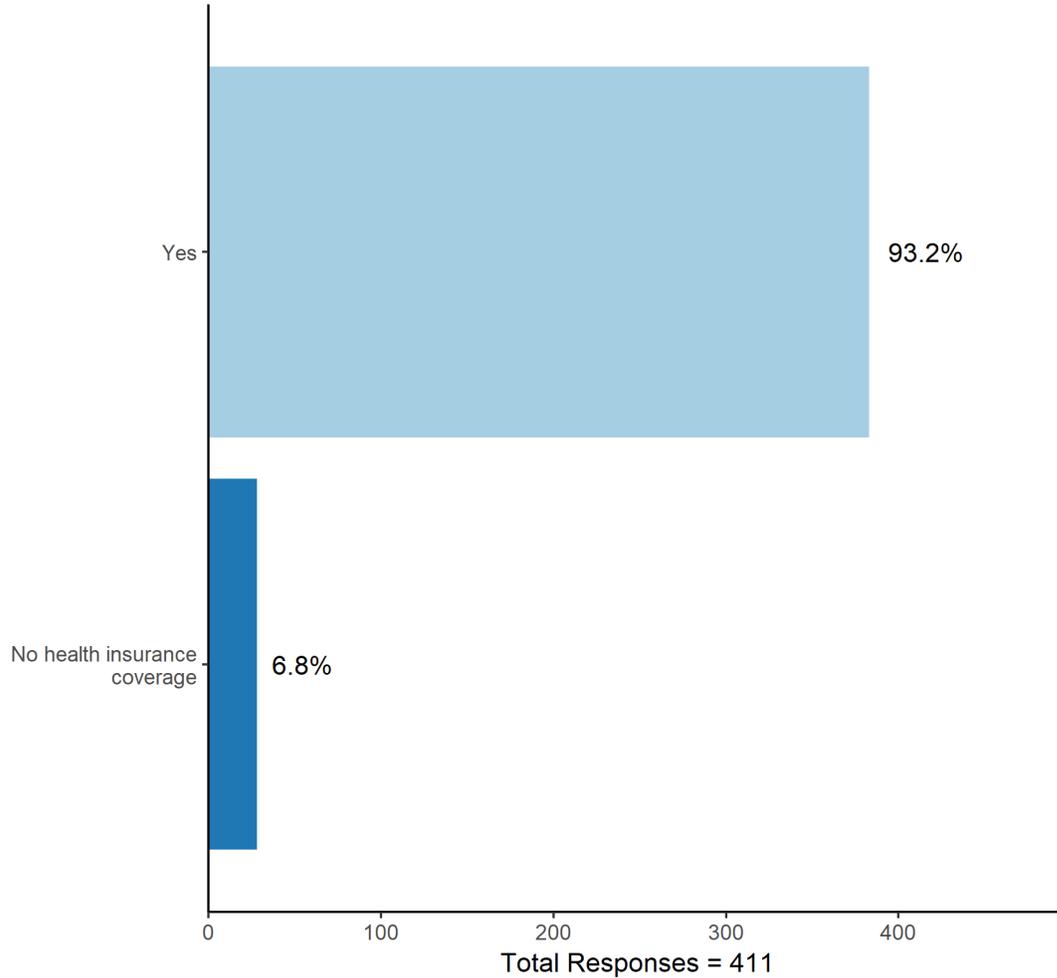
Response	Count	Percent
Yes	383	93.2%
No health insurance coverage	28	6.8%
Total Responses	411	

Question 6

Do you have ONE person you think of as your personal doctor or health care provider?

Total Responses = 409
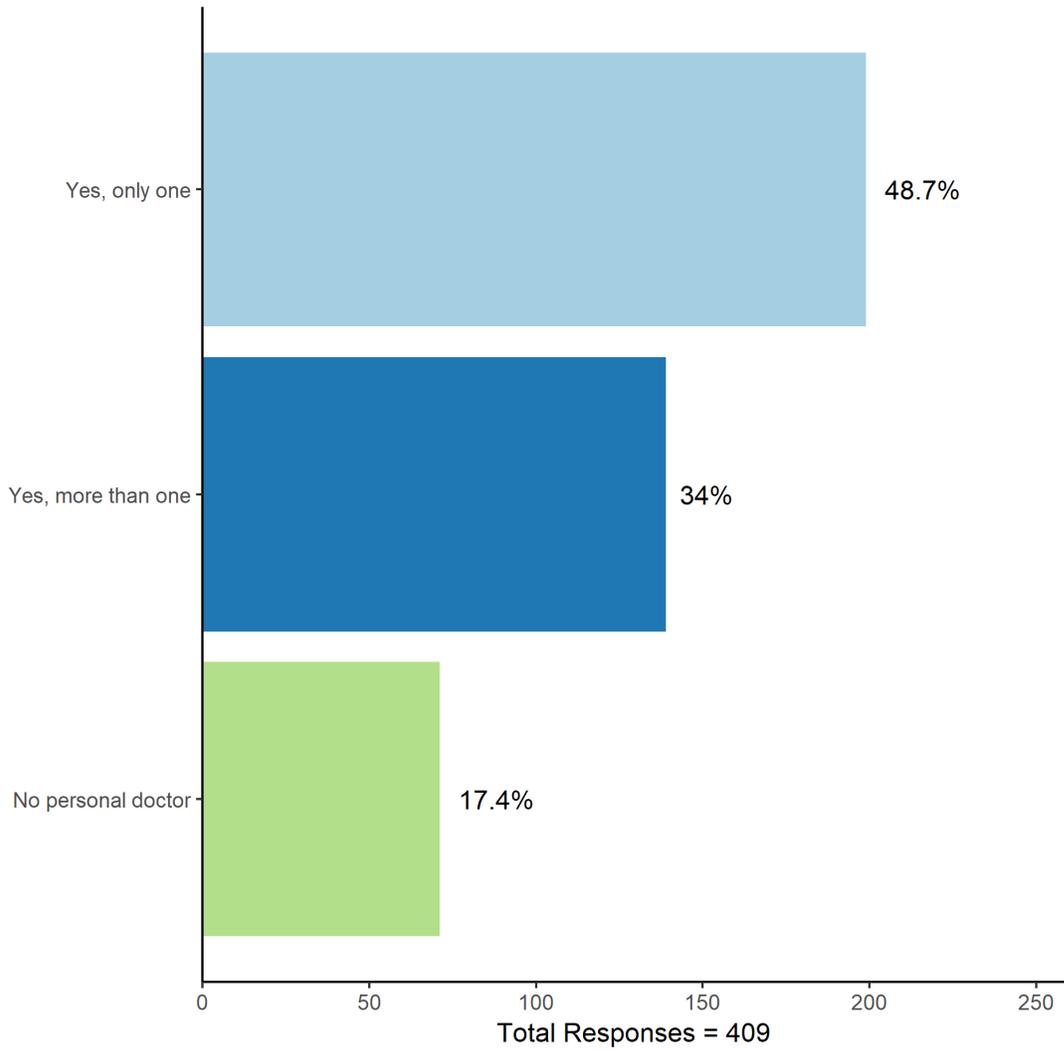
Response	Count	Percent
Yes, only one	199	48.7%
Yes, more than one	139	34%
No personal doctor	71	17.4%
Total Responses	409	

Question 7

Which of the following BEST describes your relationship with your physician and your health care use:

Total Responses = 412
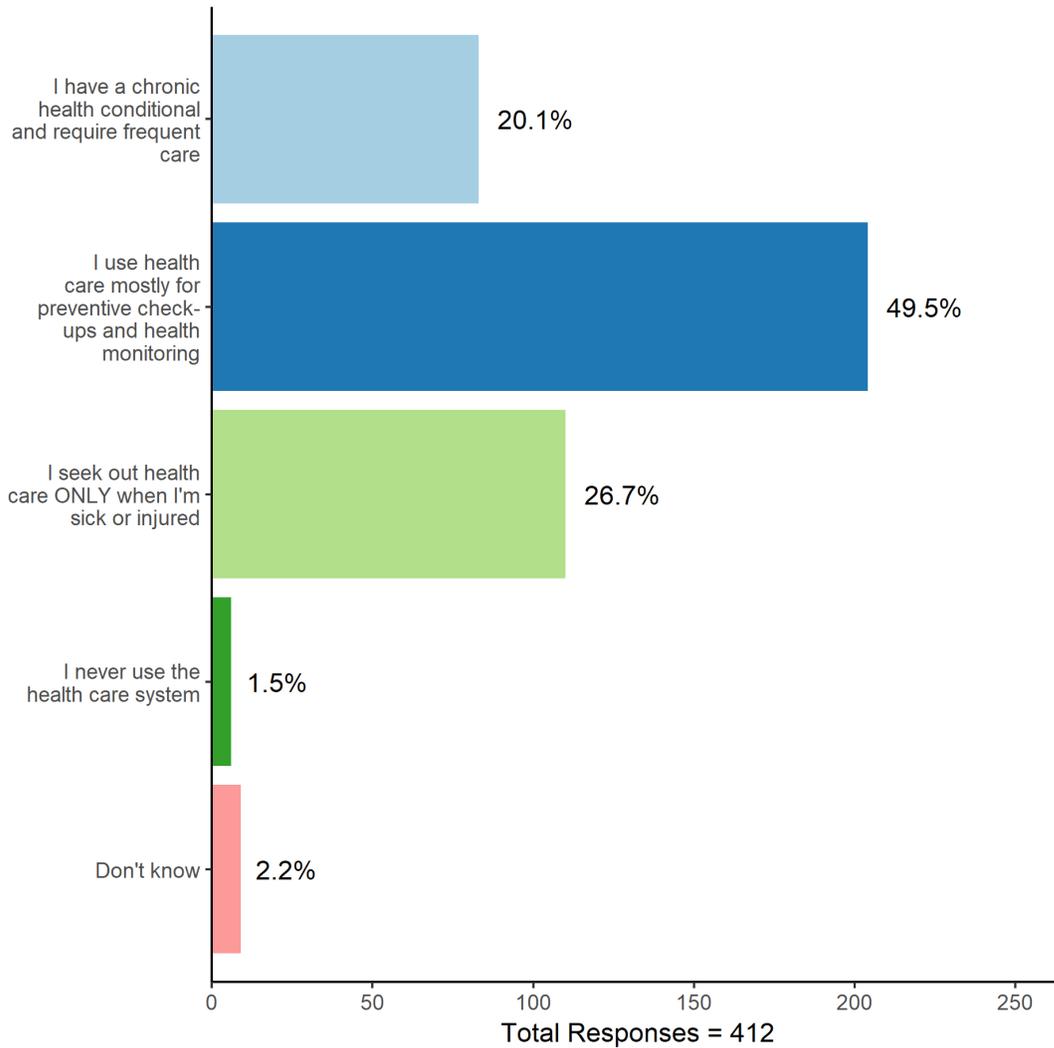
Response	Count	Percent
I have a chronic health conditional and require frequent care	83	20.1%
I use healthcare mostly for preventive check-ups and health monitoring	204	49.5%
I seek out healthcare ONLY when I'm sick or injured	110	26.7%
I never use the healthcare system	6	1.5%
Don't know	9	2.2%
Total Responses	412	

Question 8

How confident do you feel when leaving the doctor's office that you understand what the doctor has told you:
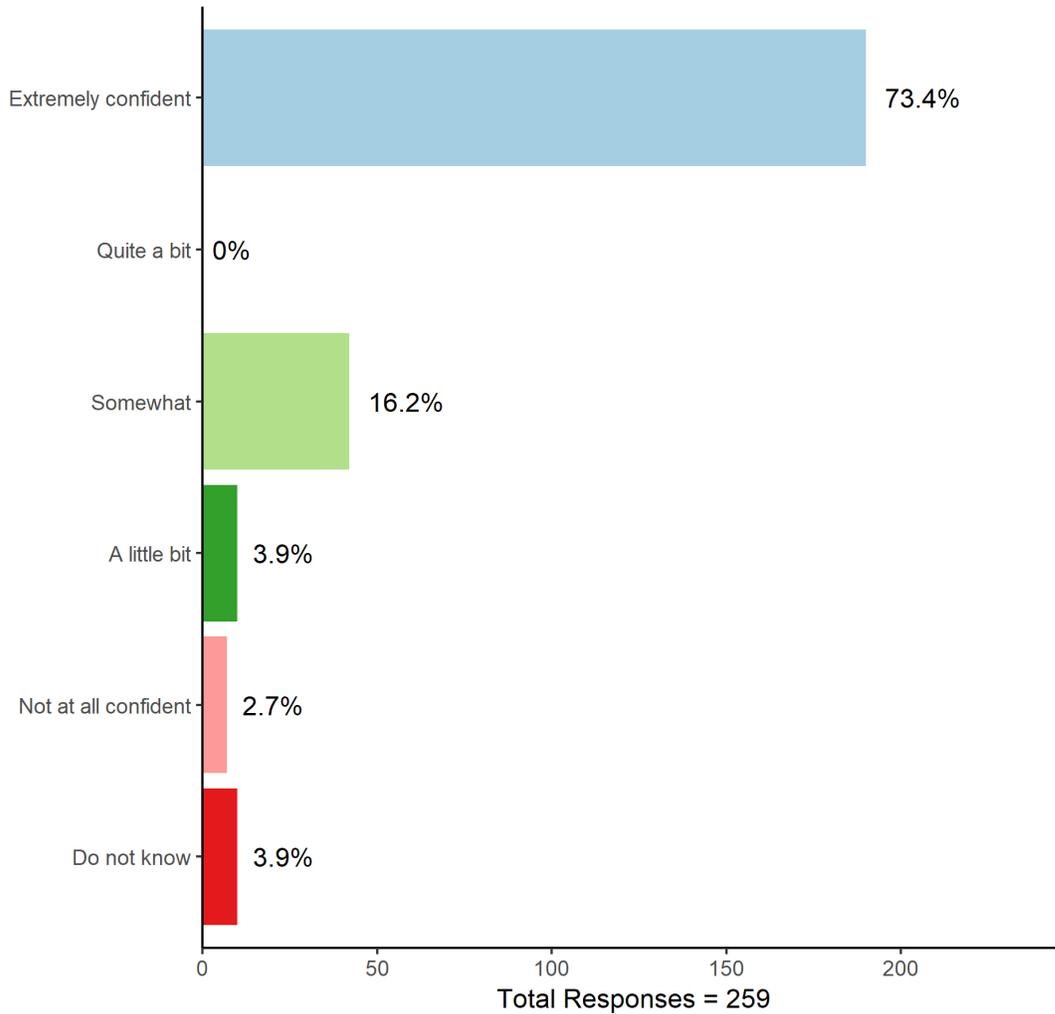
Response	Count	Percent
Extremely confident	190	73.4%
Quite a bit	0	0%
Somewhat	42	16.2%
A little bit	10	3.9%
Not at all confident	7	2.7%
Do not know	10	3.9%
Total Responses	259	

Question 9

Has a lack of transportation kept you from getting to a doctor's office or to any other health care appointment during the PAST YEAR?

Yes — 9.4%

No — 86.5%

Don't know — 4.2%

Total Responses = 406
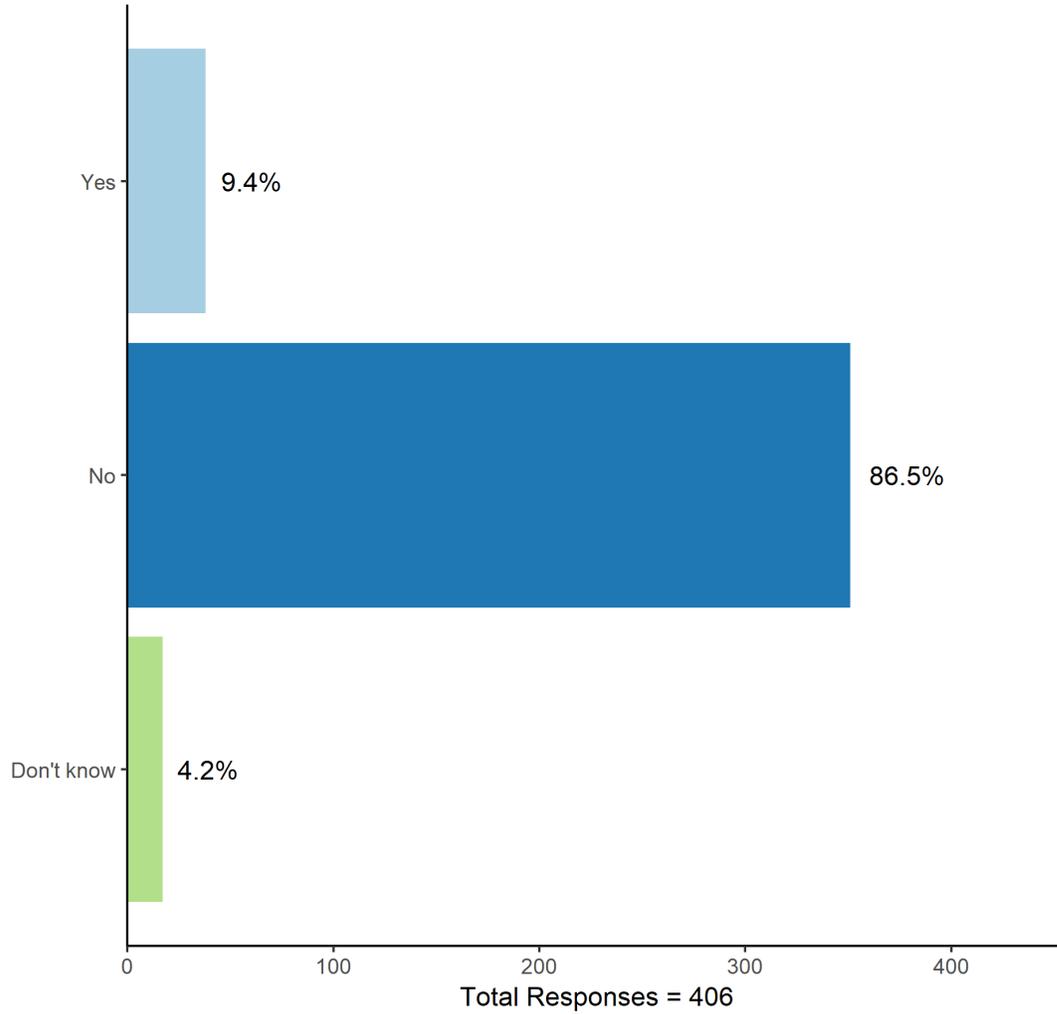
Response	Count	Percent
Yes	38	9.4%
No	351	86.5%
Don't know	17	4.2%
Total Responses	406	

Question 10

During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

Total Responses = 409
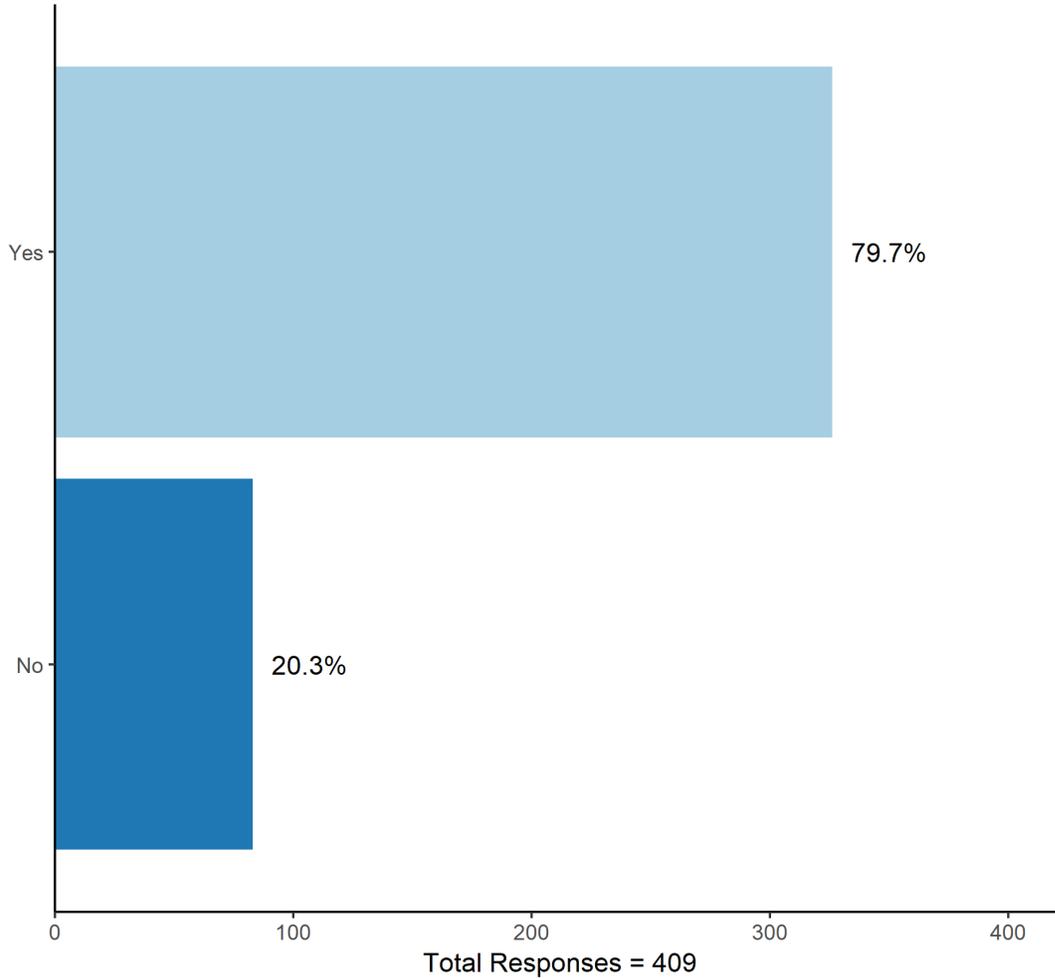
Response	Count	Percent
Yes	326	79.7%
No	83	20.3%
Total Responses	409	

Question 11

Have you ever been told by a doctor that you have diabetes?

Yes — 8.6%

No — 91.4%

0   100   200   300   400

Total Responses = 408
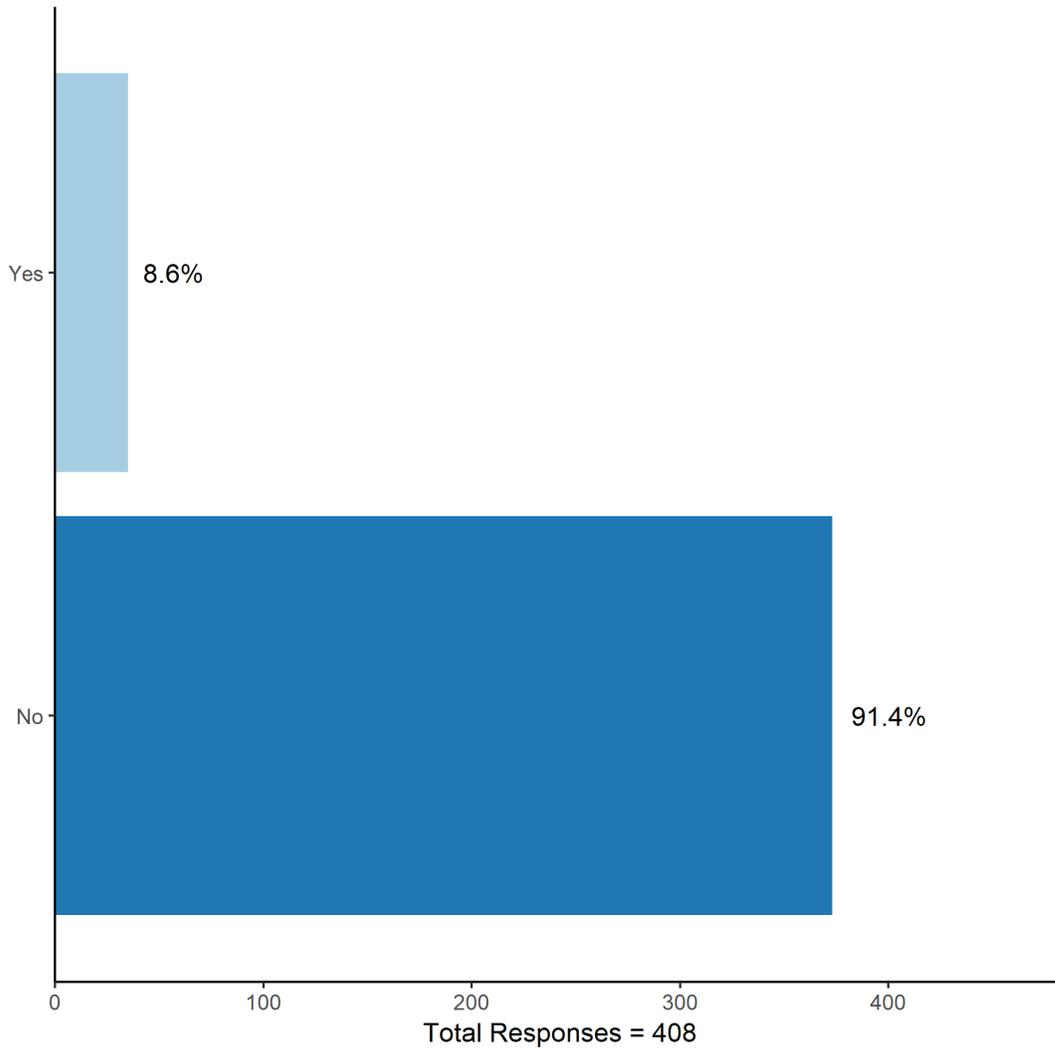
Response	Count	Percent
Yes	35	8.6%
No	373	91.4%
Total Responses	408	

Question 12

Has a doctor, nurse, or other health professional EVER told you that you had...
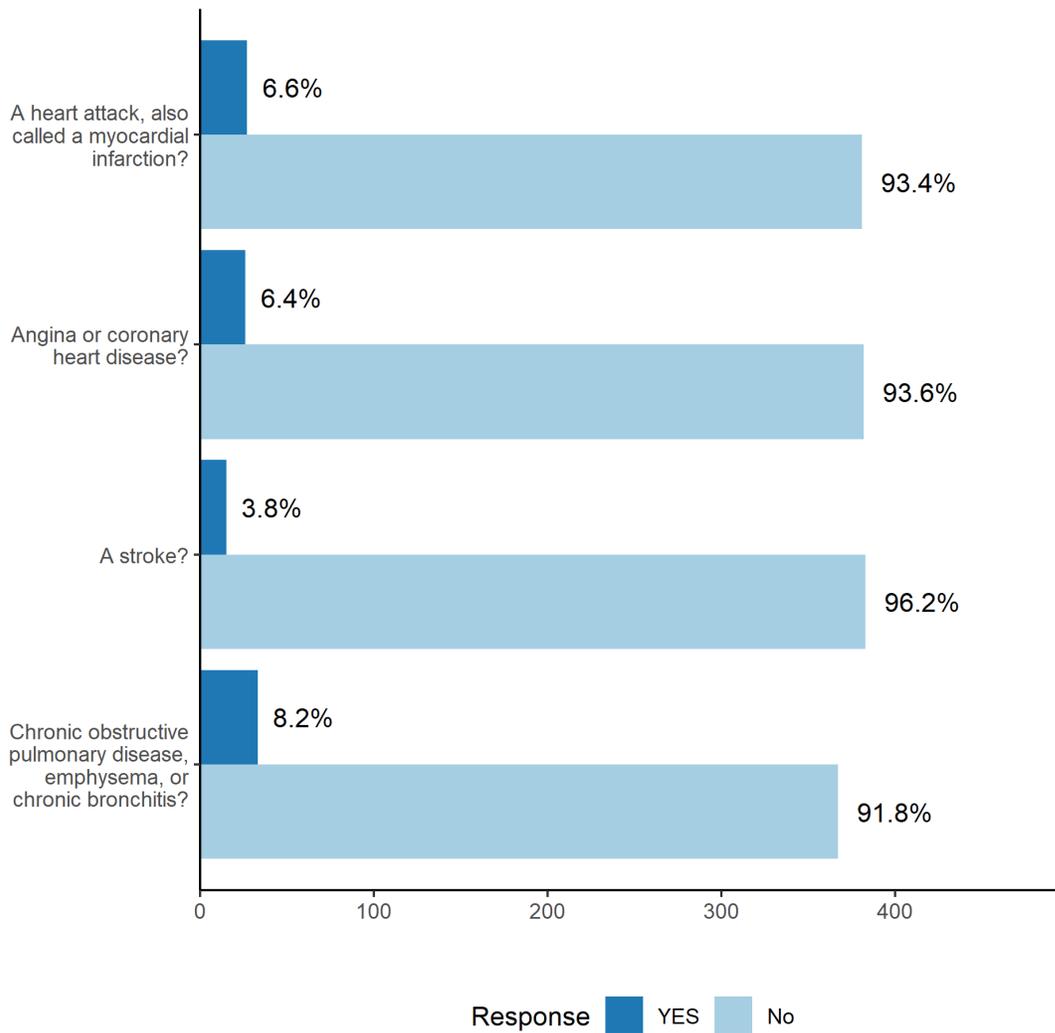
Question	No	YES	Total
A heart attack, also called a myocardial infarction?	381	27	408
Angina or coronary heart disease?	382	26	408
A stroke?	383	15	398
Chronic obstructive pulmonary disease, emphysema, or chronic bronchitis?	367	33	400

Question 13

Has a doctor, nurse or other health professional EVER told you that your blood cholesterol is high?

Total Responses = 407
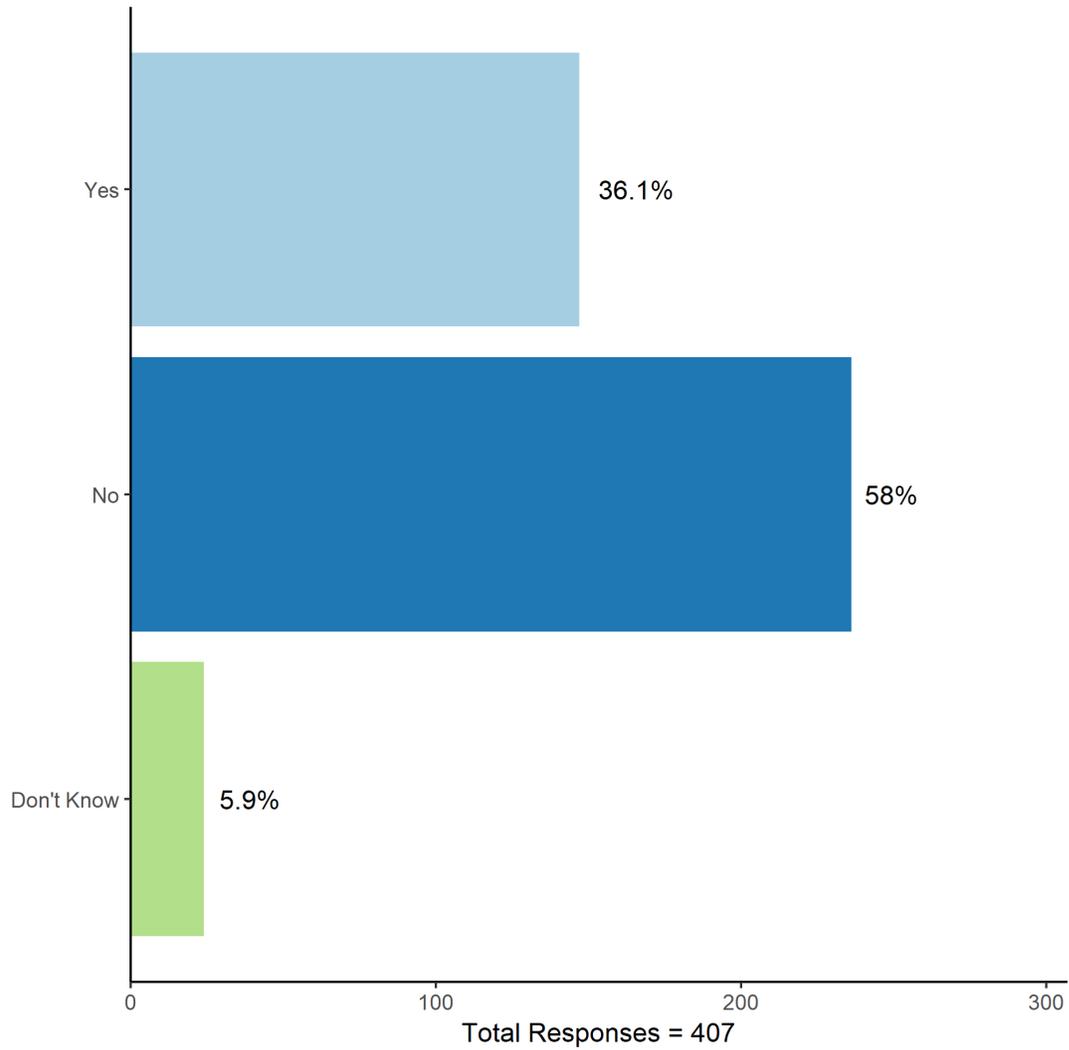
Response	Count	Percent
Yes	147	36.1%
No	236	58%
Don't Know	24	5.9%
Total Responses	407	

Question 14

Has a doctor, nurse, or other health professional EVER told you that you had high blood pressure?
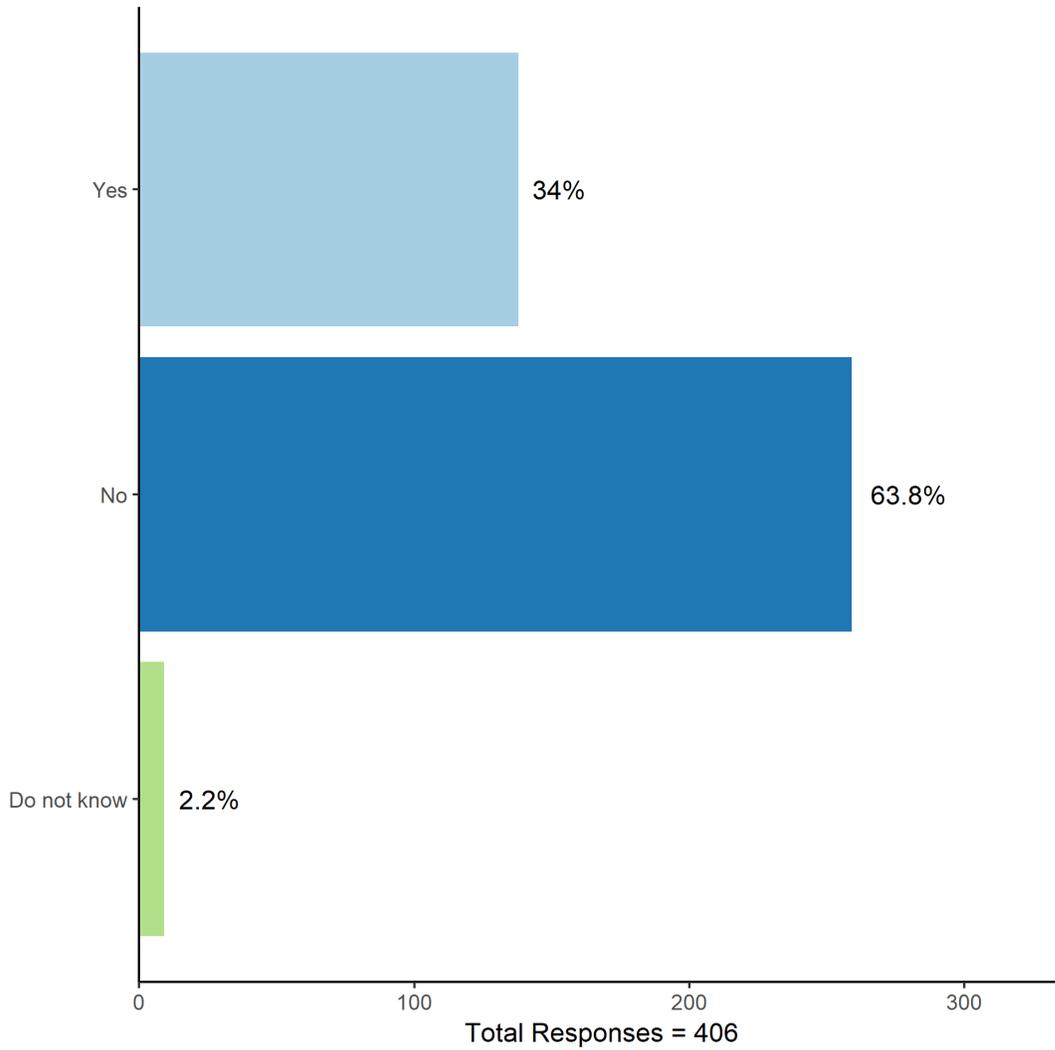
Response	Count	Percent
Yes	138	34%
No	259	63.8%
Do not know	9	2.2%
Total Responses	406	

Question 15

How long has it been since you last visited a dentist or a dental clinic for any reason?

Total Responses = 410
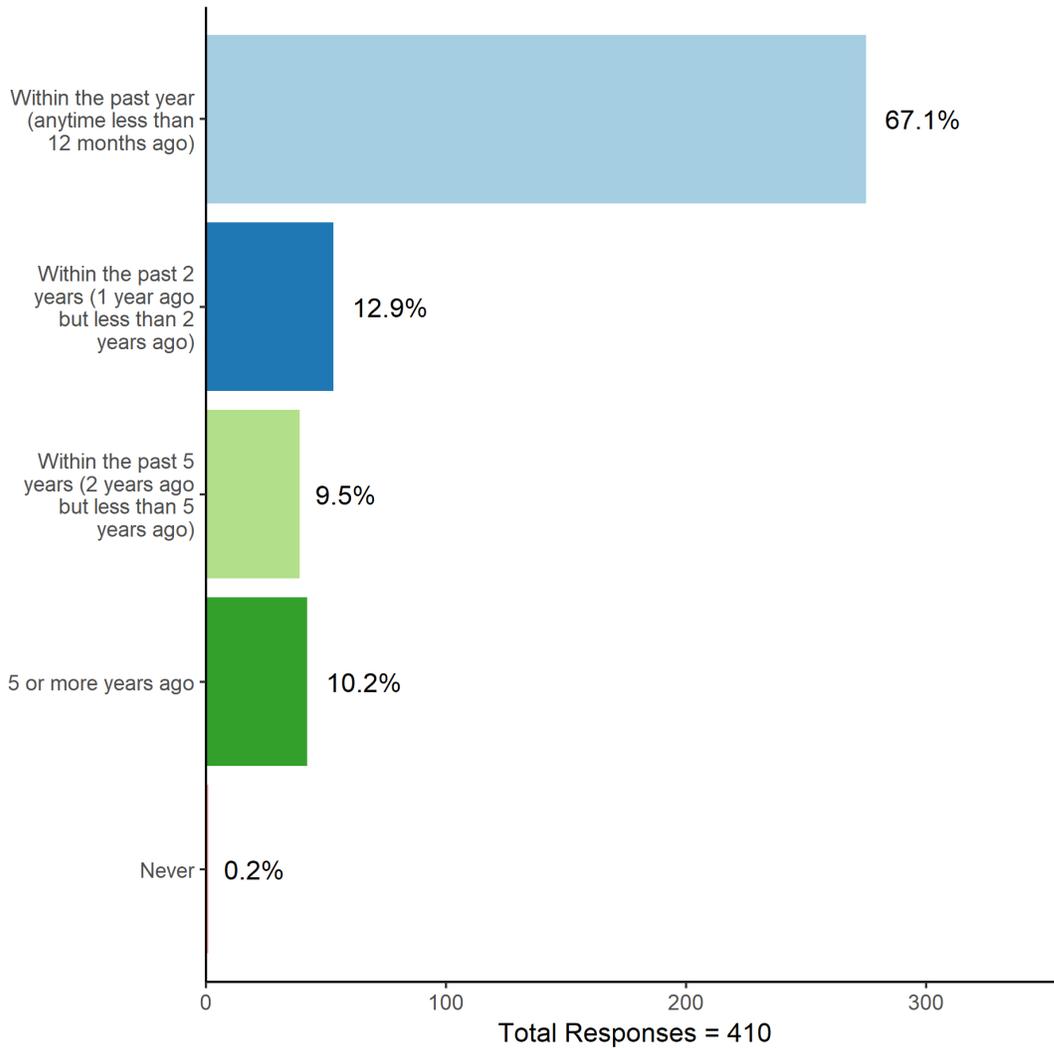
Response	Count	Percent
Within the past year (anytime less than 12 months ago)	275	67.1%
Within the past 2 years (1 year ago but less than 2 years ago)	53	12.9%
Within the past 5 years (2 years ago but less than 5 years ago)	39	9.5%
5 or more years ago	42	10.2%
Never	1	0.2%
Total Responses	410	

Question 17

Do you have asthma?

Yes — 12%

No — 88%

0   100   200   300   400

Total Responses = 407
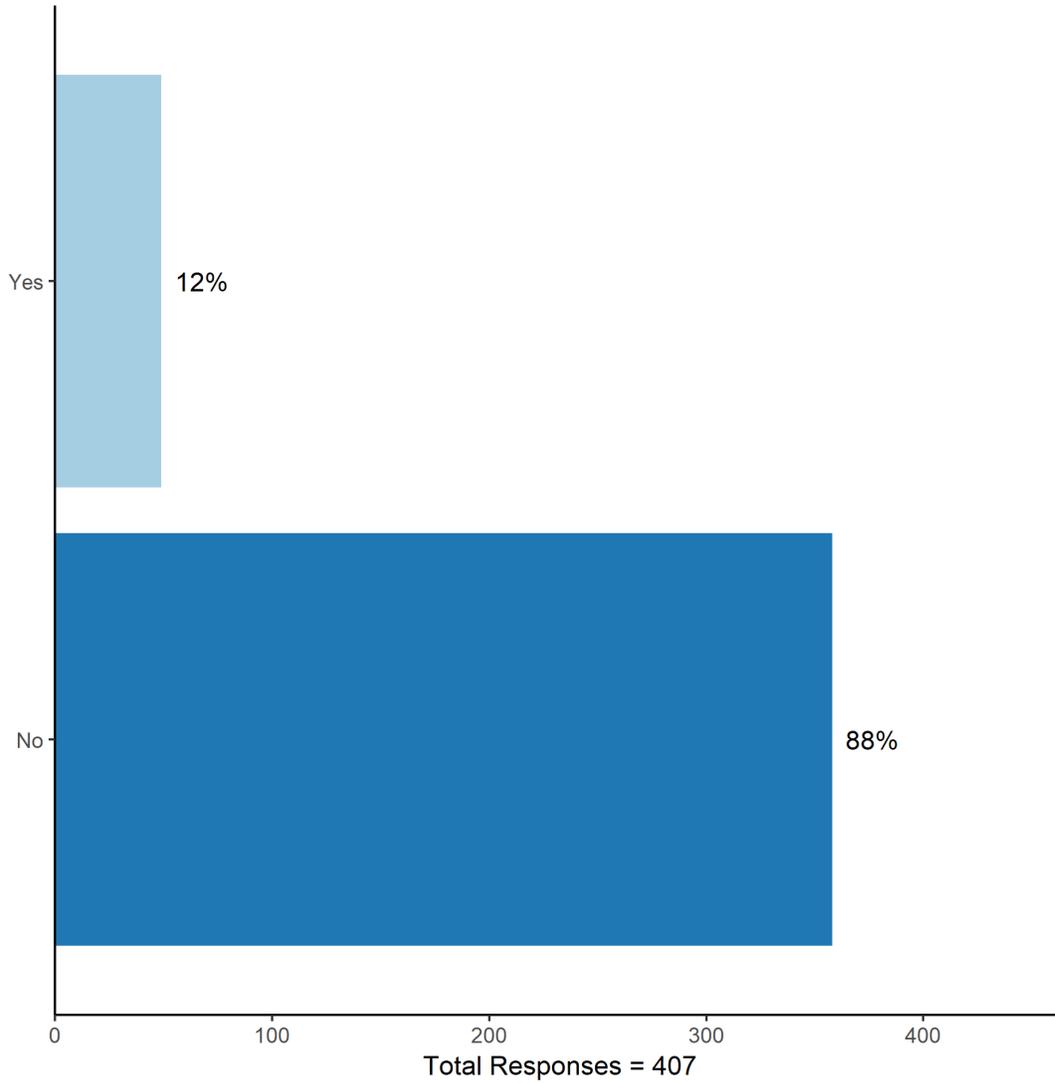
Response	Count	Percent
Yes	49	12%
No	358	88%
Total Responses	407	

Do you now smoke cigarettes every day, some days or not at all?

Total Responses = 406
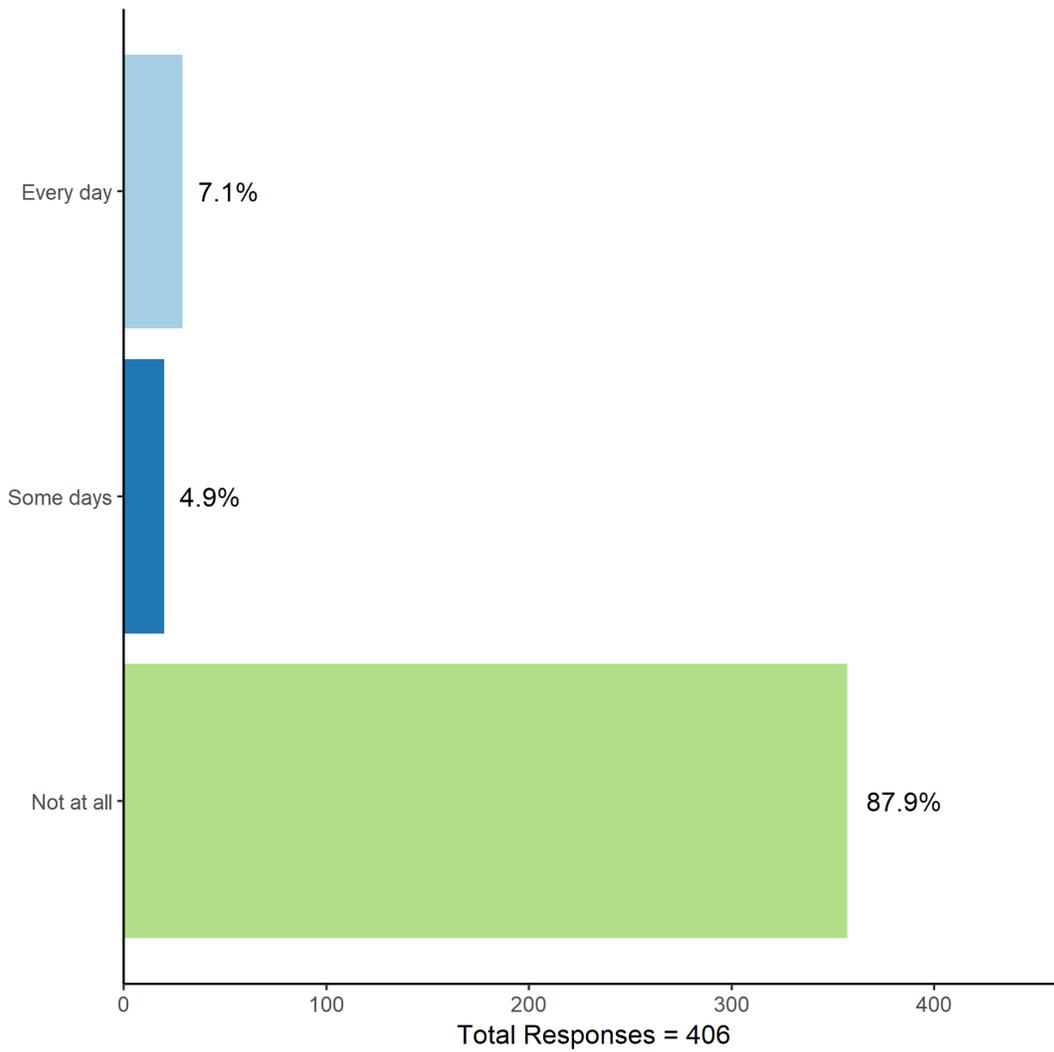
Response	Count	Percent
Every day	29	7.1%
Some days	20	4.9%
Not at all	357	87.9%
Total Responses	406	

Question 19

Do you currently use chewing tobacco, snuff, or snus every day, some days or not at all?

Every day — 1%

Some days — 0.7%

Not at all — 98.3%

Total Responses = 410
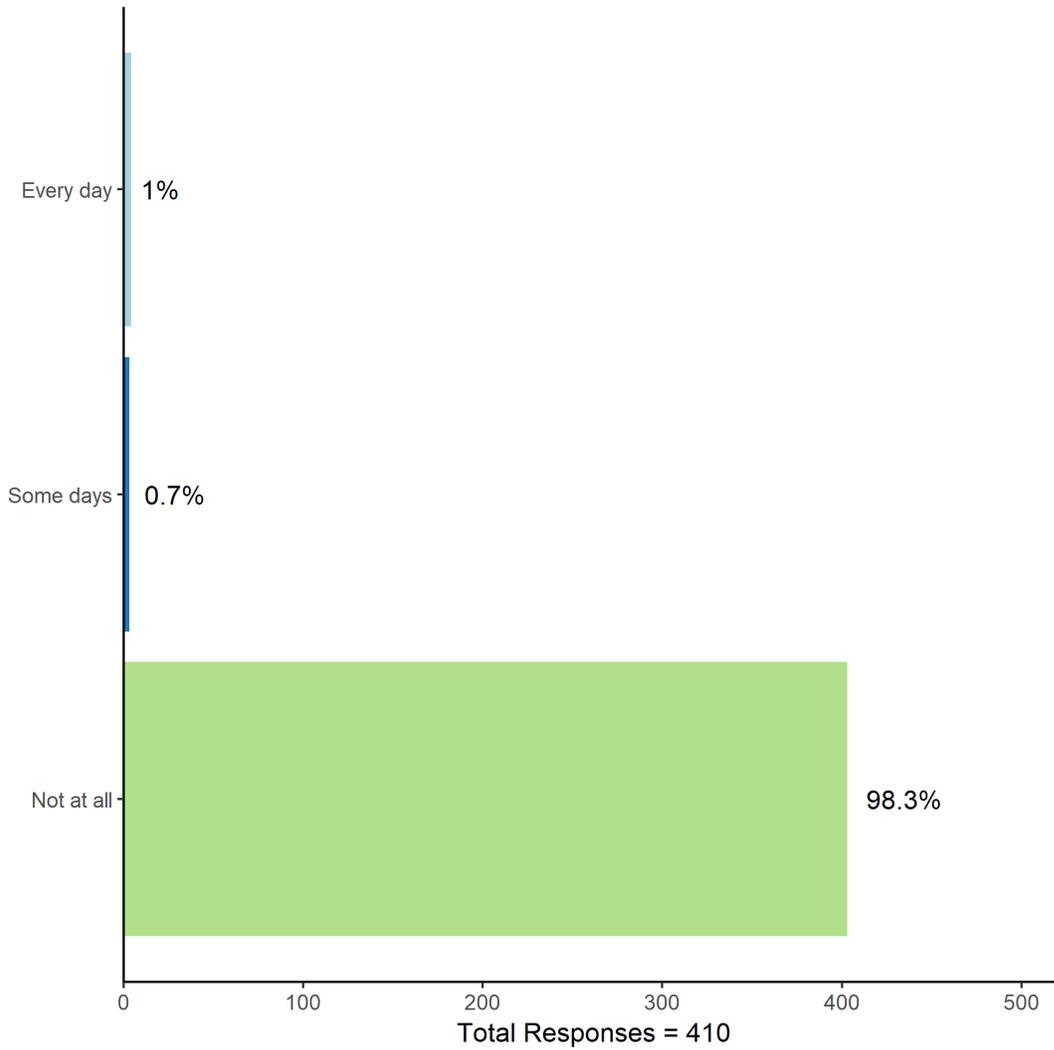
Response	Count	Percent
Every day	4	1%
Some days	3	0.7%
Not at all	403	98.3%
Total Responses	410	

Question 20

Electronic Cigarettes, or e-cigarettes as they are often called, are battery-operated devices that simulate smoking a cigarette, but do not involve the burning of tobacco. The heated vapor produced by an e-cigarette often contains nicotine. Have you ever used an electronic cigarette, even just one time in your life?

Total Responses = 407
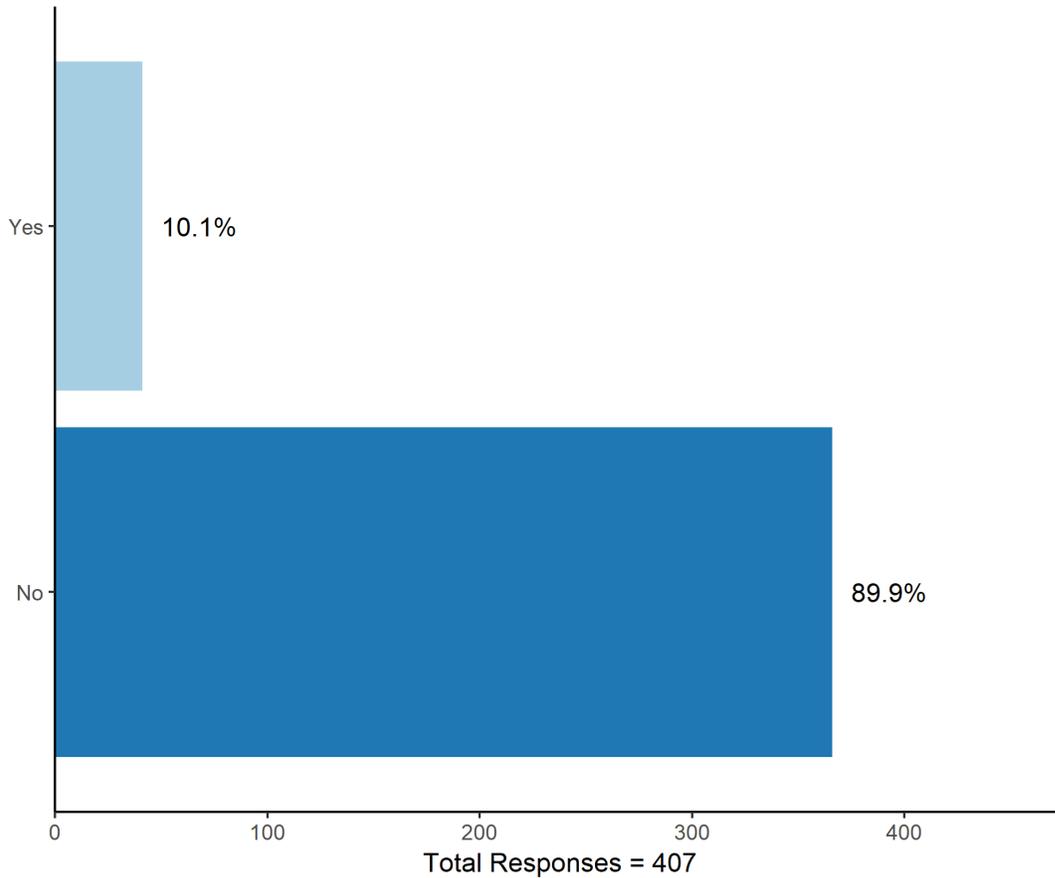
Response	Count	Percent
Yes	41	10.1%
No	366	89.9%
Total Responses	407	

Question 21

Do you now use electronic cigarettes every day, some days, or not at all?

Every day — 1%

Some days — 1%

Not at all — 98%

Total Responses = 410
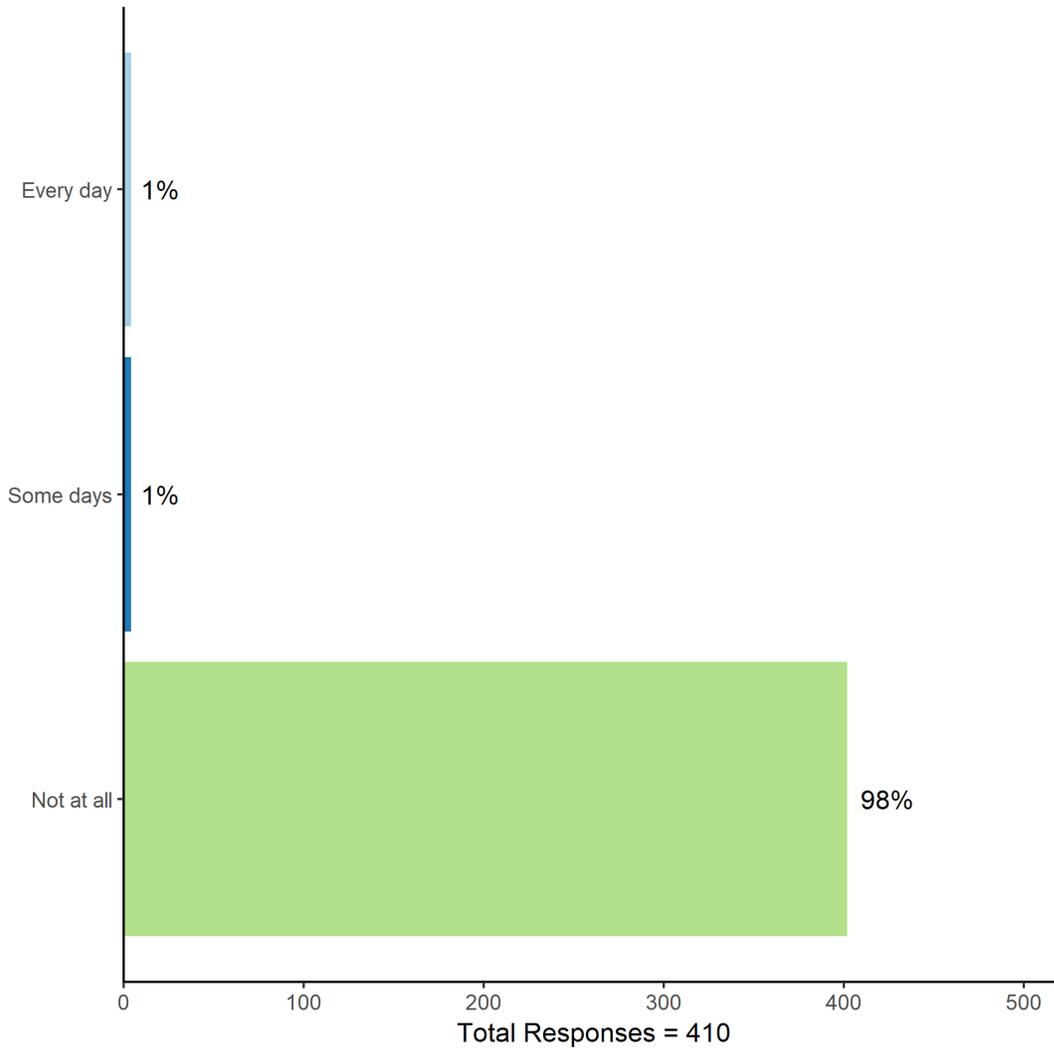
Response	Count	Percent
Every day	4	1%
Some days	4	1%
Not at all	402	98%
Total Responses	410	

Question 22

During the past 30 days, how many DAYS per WEEK did you have at least one drink of any alcoholic beverage?

Total Responses = 409
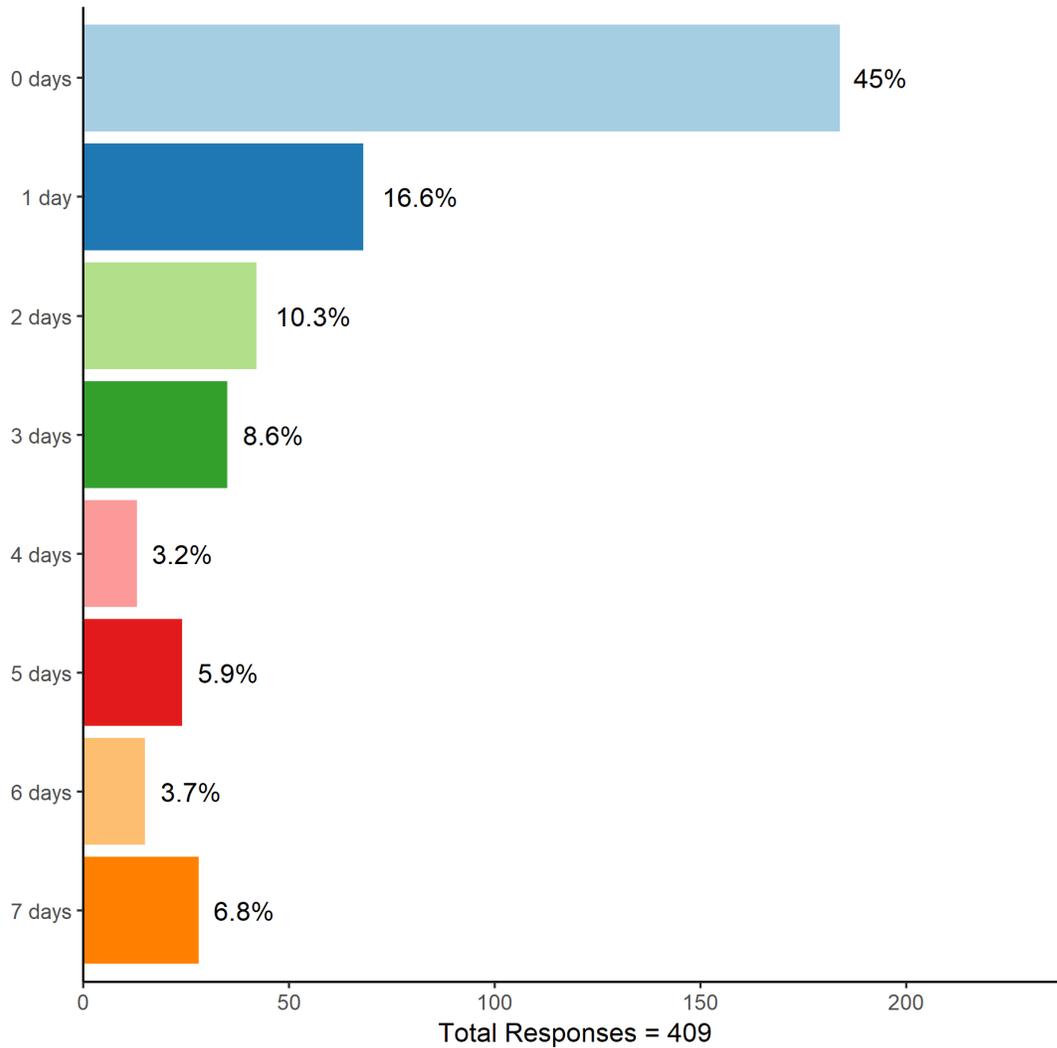
Response	Count	Percent
0 days	184	45%
1 day	68	16.6%
2 days	42	10.3%
3 days	35	8.6%
4 days	13	3.2%
5 days	24	5.9%
6 days	15	3.7%
7 days	28	6.8%
Total Responses	409	

Question 23

During the past 30 days, how many DAYS per MONTH did you have at least one drink of any alcoholic beverage?

Total Responses = 411
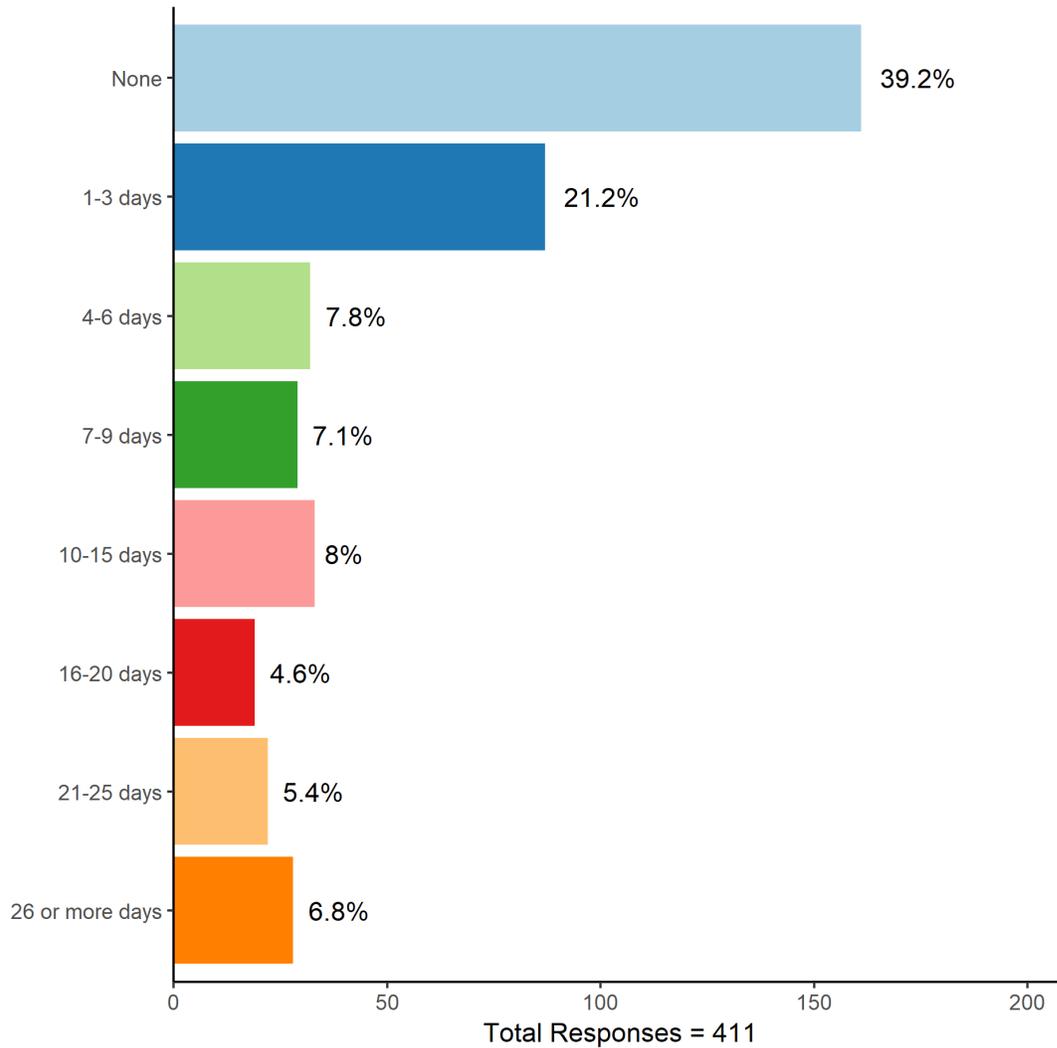
Response	Count	Percent
None	161	39.2%
1-3 days	87	21.2%
4-6 days	32	7.8%
7-9 days	29	7.1%
10-15 days	33	8%
16-20 days	19	4.6%
21-25 days	22	5.4%
26 or more days	28	6.8%
Total Responses	411	

Question 24

Considering all types of alcoholic beverages, how many times during the past 30 days did you have FIVE for men, FOUR for women or more drinks on an occasion?

Total Responses = 409
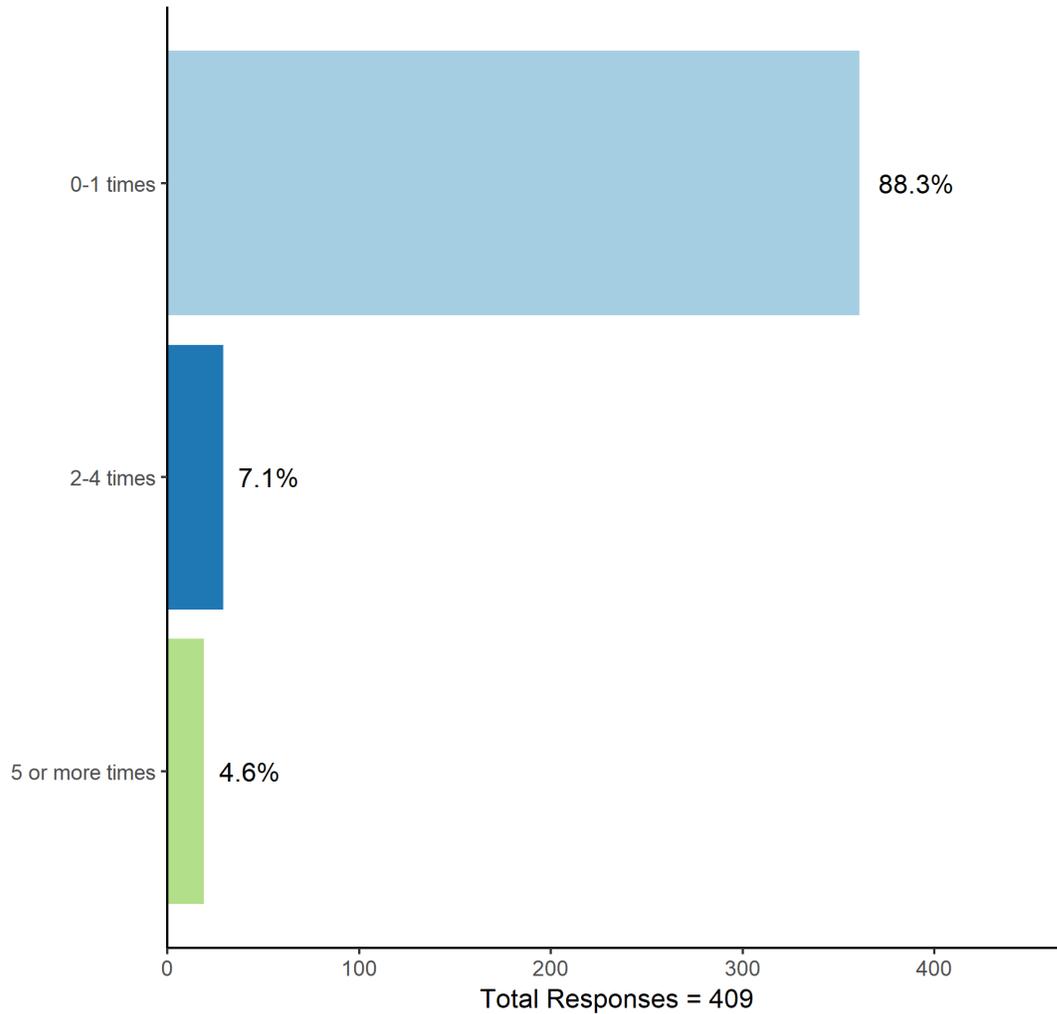
Response	Count	Percent
0-1 times	361	88.3%
2-4 times	29	7.1%
5 or more times	19	4.6%
Total Responses	409	

Question 25

The next two questions are about marijuana
(aka cannabis, pot, grass, weed, etc.) and
hashish. Marijuana is usually smoked or it is sometimes
cooked in food. Hashish is a form of marijuana that
is also called hash. It is usually smoked in a pipe.
Another form of hashish is hash oil. Have you ever,
even once, used marijuana or hashish?

Total Responses = 405
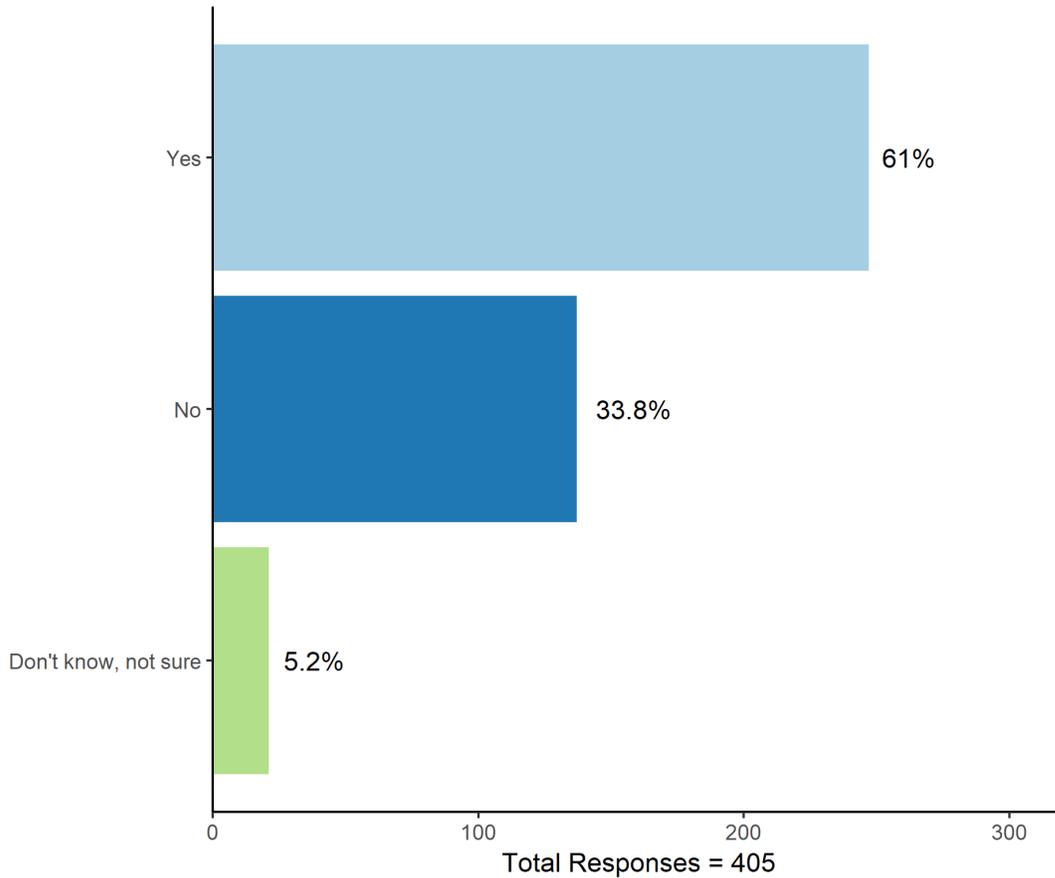
Response	Count	Percent
Yes	247	61%
No	137	33.8%
Don't know, not sure	21	5.2%
Total Responses	405	

Question 26

Think specifically about the past 30 days, from today up to and including today. During the past 30 days, on how many days did you use marijuana or hashish?

Total Responses = 405
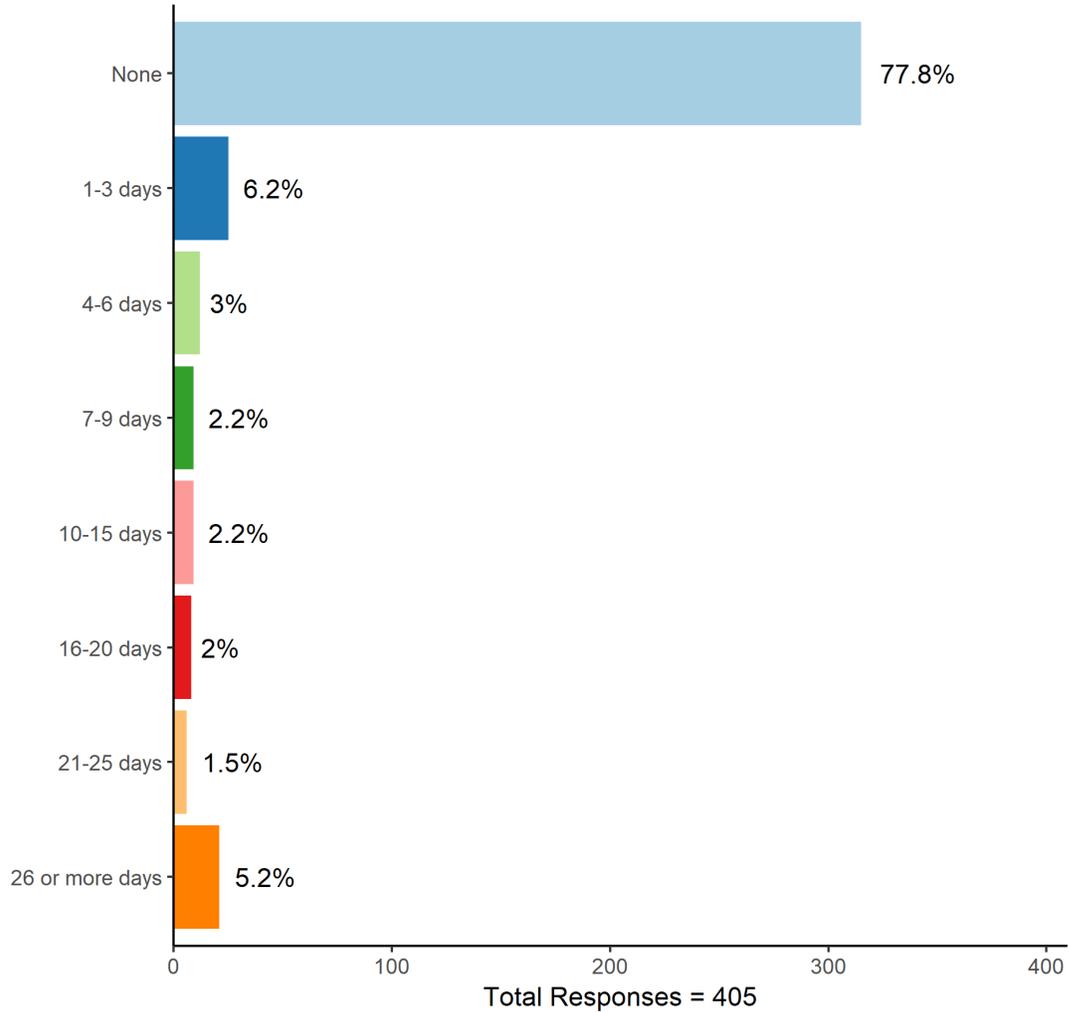
Response	Count	Percent
None	315	77.8%
1-3 days	25	6.2%
4-6 days	12	3%
7-9 days	9	2.2%
10-15 days	9	2.2%
16-20 days	8	2%
21-25 days	6	1.5%
26 or more days	21	5.2%
Total Responses	405	

Question 27

A flu shot is an influenza vaccine injected into your arm. During the past 12 months, have you had a seasonal flu shot?

Total Responses = 394
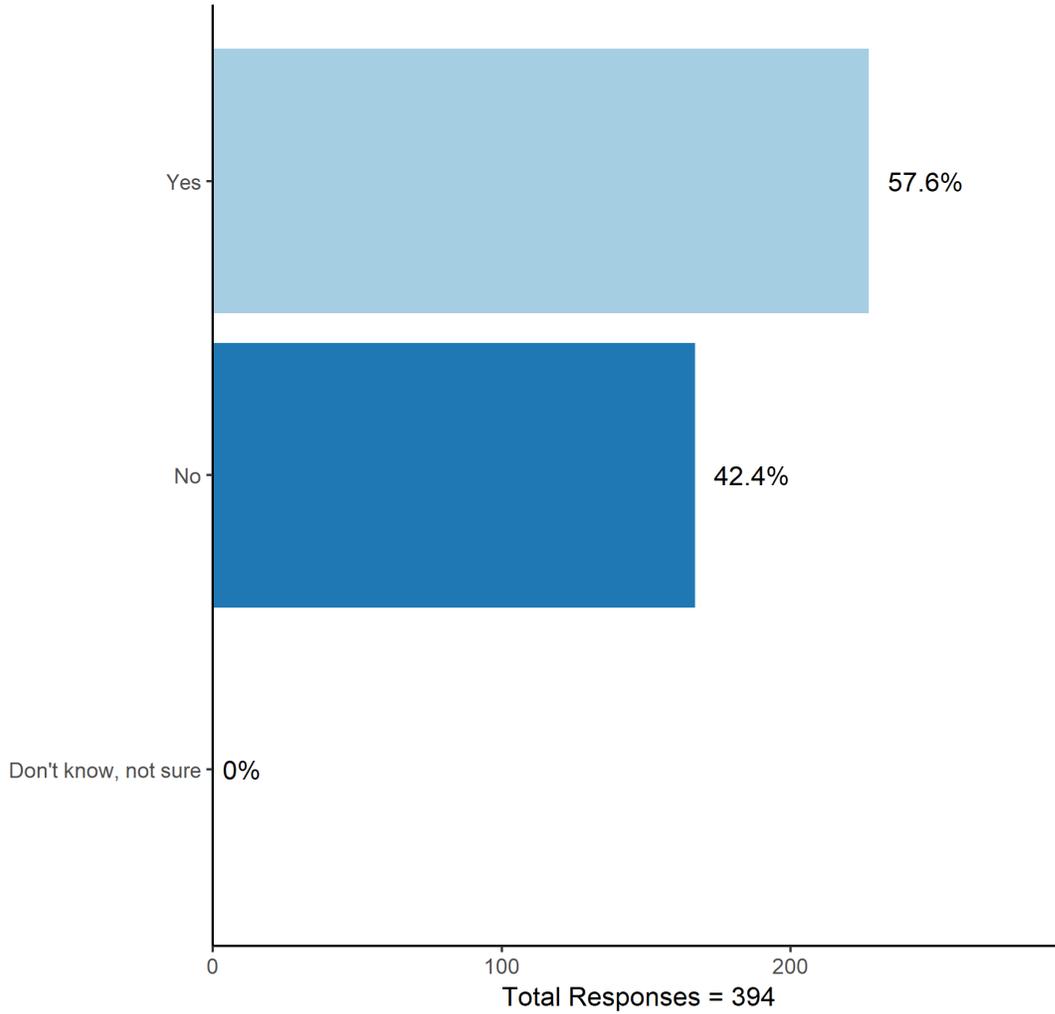
Response	Count	Percent
Yes	227	57.6%
No	167	42.4%
Don't know, not sure	0	0%
Total Responses	394	

Question 28

Females only - A Pap test is a test for cancer of the cervix. Have you ever had a Pap test?

Total Responses = 308
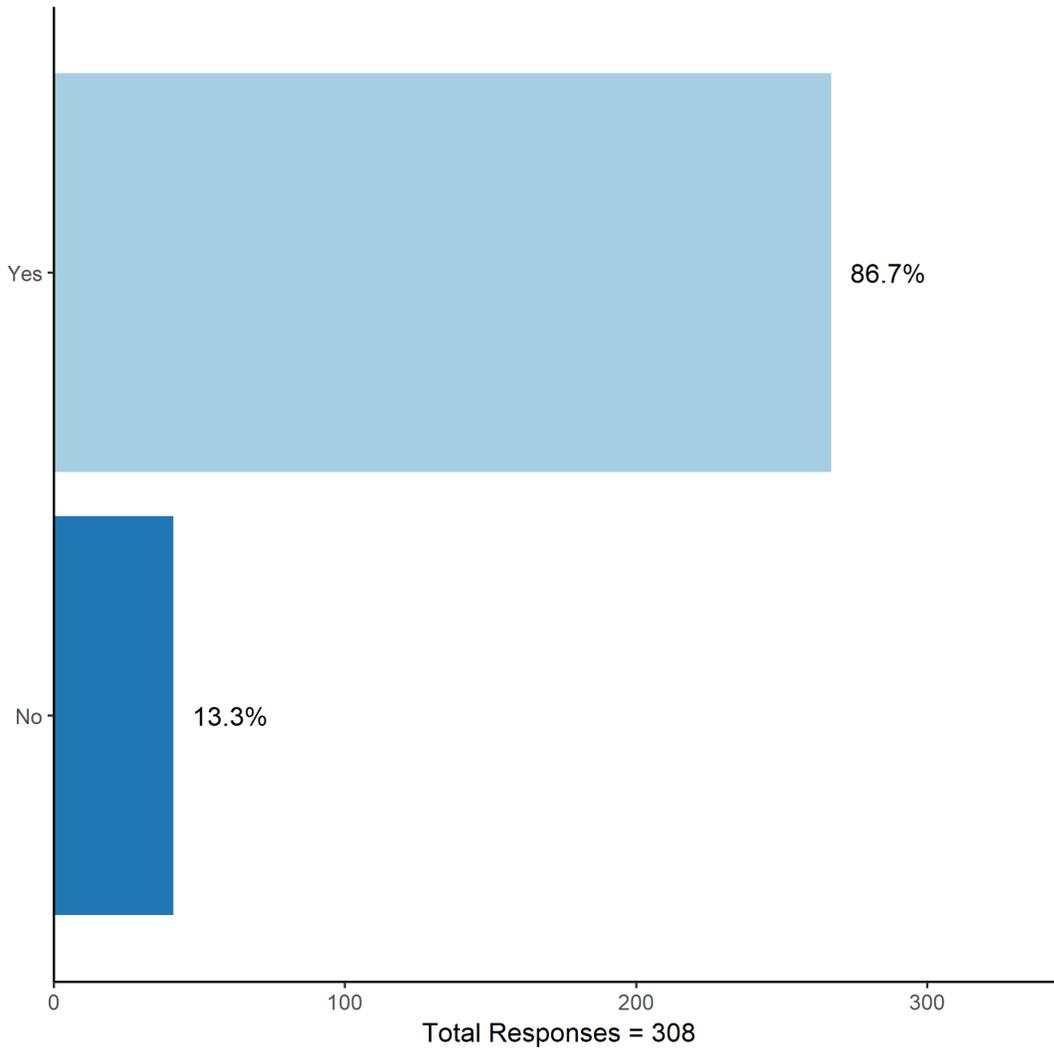
Response	Count	Percent
Yes	267	86.7%
No	41	13.3%
Total Responses	308	

Question 29

Sigmoidoscopy and colonoscopy are exams in which a tube
is inserted in the rectum to view the colon for signs
of cancer or other health problems. Have you ever had
either of these exams?

Yes — 52.8%

No — 47.2%

Total Responses = 405
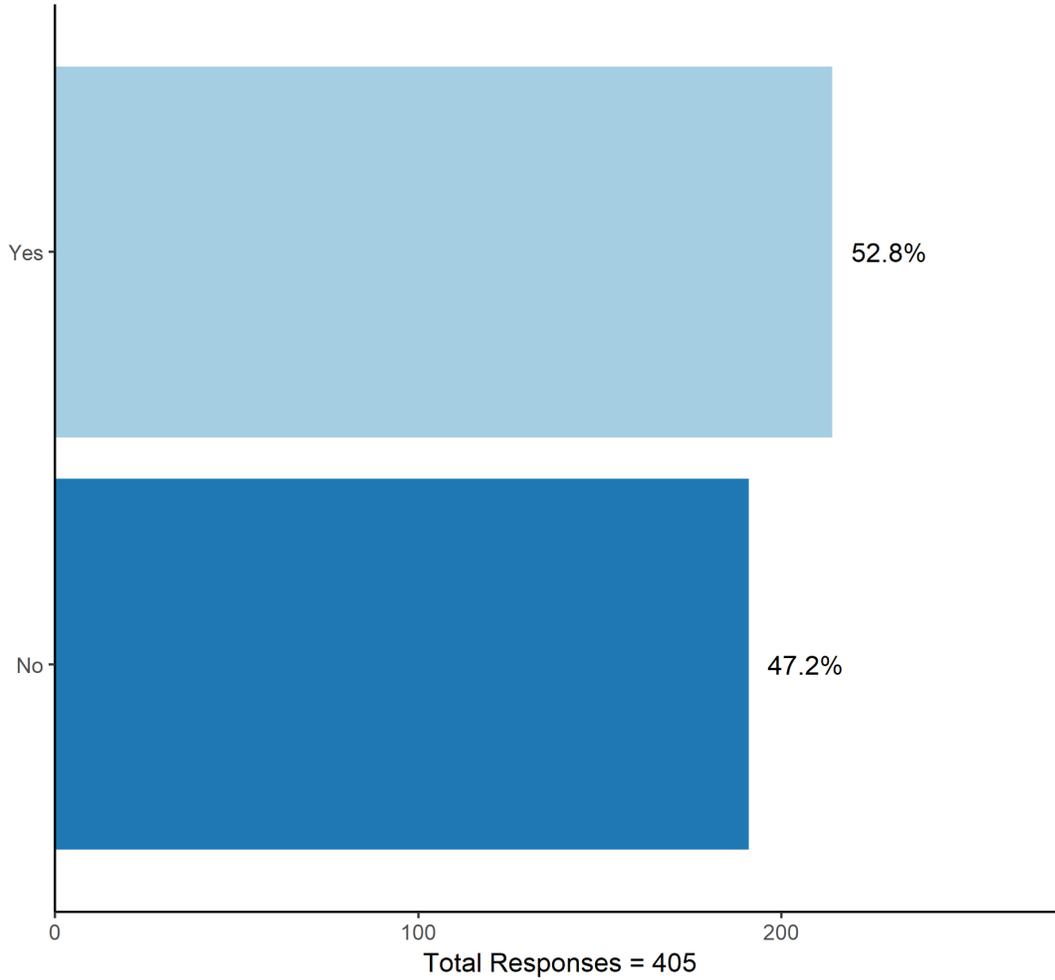
Response	Count	Percent
Yes	214	52.8%
No	191	47.2%
Total Responses	405	

Have you EVER been told by a doctor, nurse, or other health professional you had cancer?

Total Responses = 406
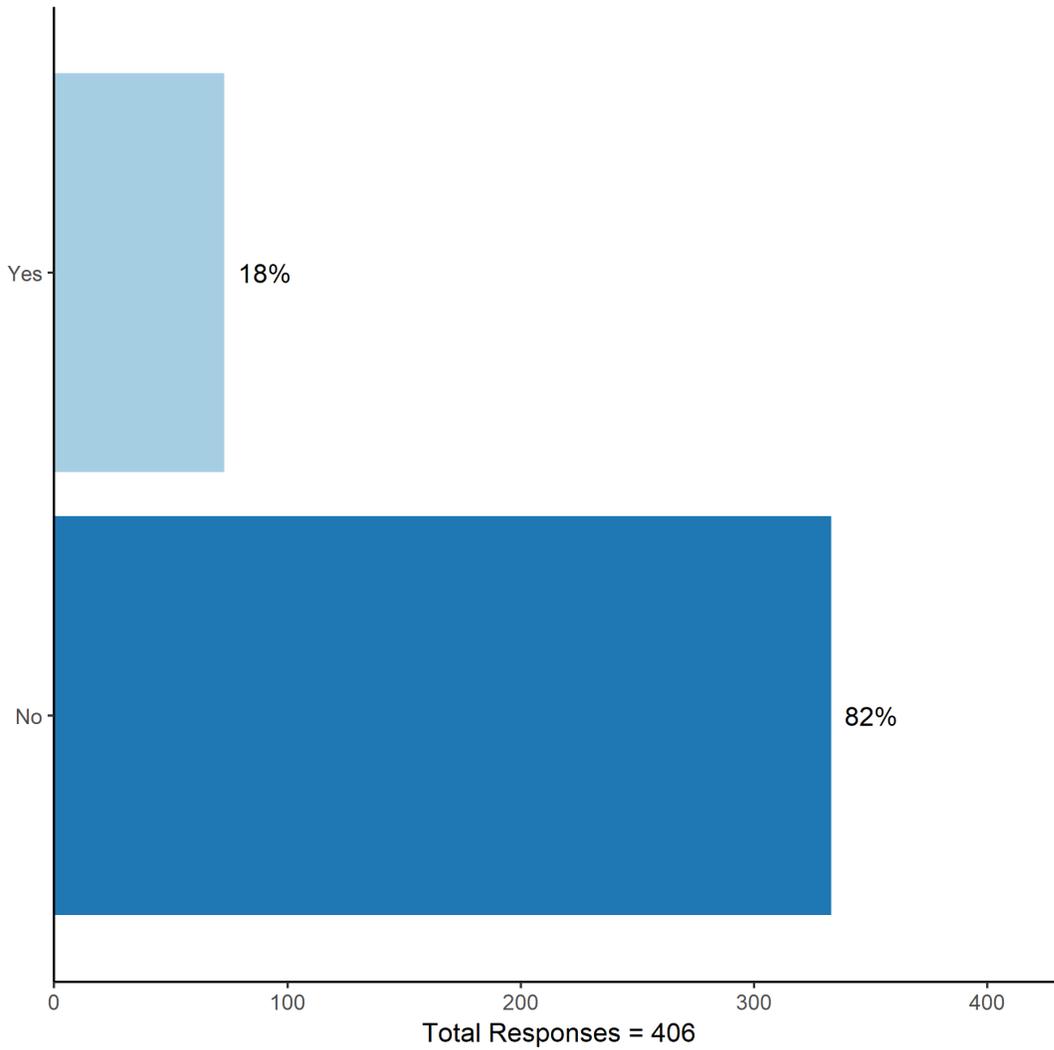
Response	Count	Percent
Yes	73	18%
No	333	82%
Total Responses	406	

Over the last 2 weeks, how many days have you:

Felt bad about yourself or that you were a failure or had let yourself or your family down?
0.2%
5.2%
2.7%
2.7%
5.7%
17.3%
66.1%

Felt tired or had little energy?
10.3%
7.5%
9.8%
13.3%
39.6%
19.5%

Had trouble falling asleep or staying asleep or sleeping too much?
0.2%
12.9%
6.2%
7.2%
10.4%
30.3%
32.6%

Felt down, depressed or hopeless?
1%
4%
3%
3.2%
7.2%
26.9%
54.6%

Had little interest or pleasure doing things?
1.2%
3%
2.5%
4%
7.2%
26%
56%

0   100   200   300

Response
Do not Know   10-12 days   4-6 days   None
13-14 days   7-9 days   1-3 days
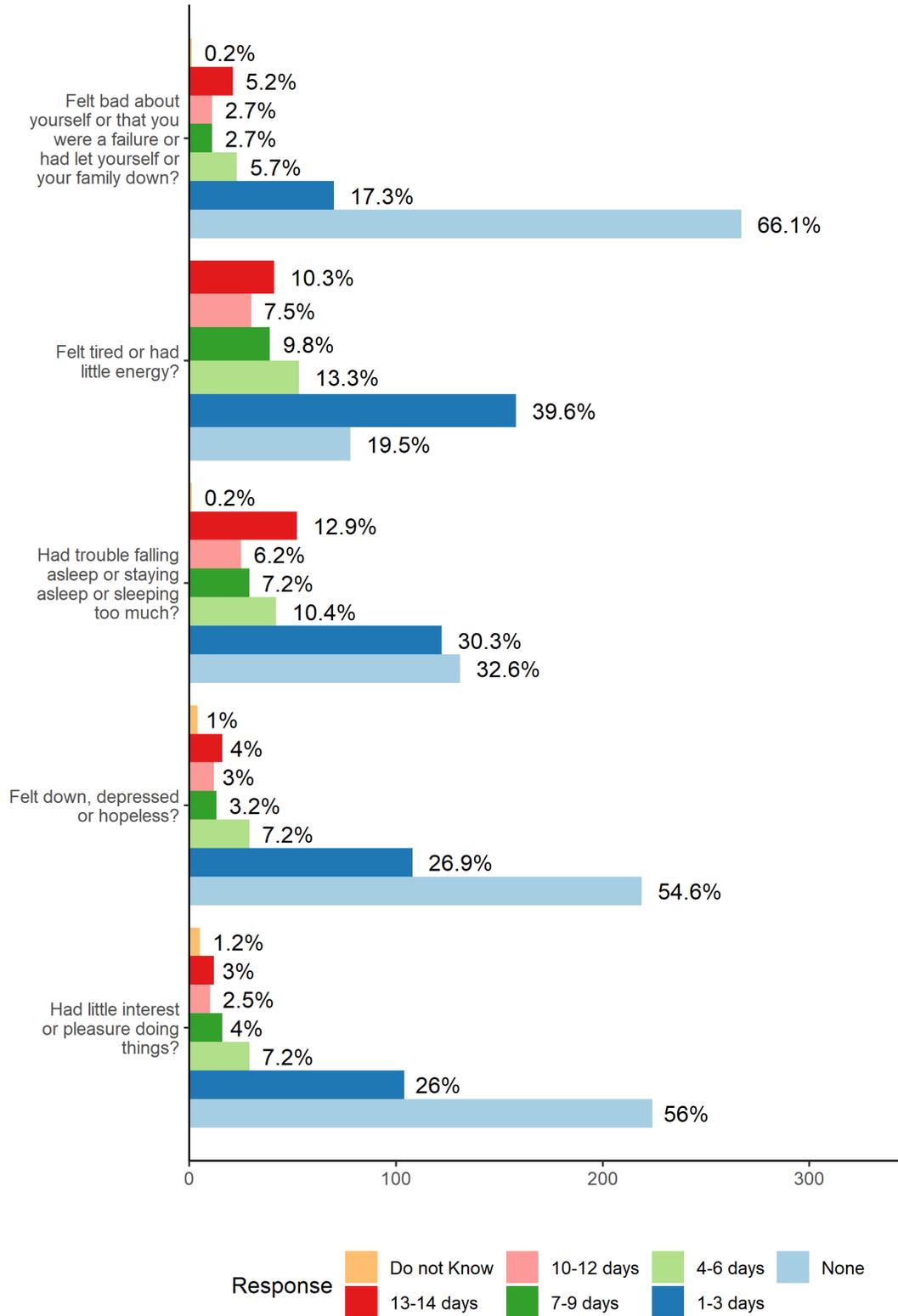
Question	1-3 days	10-12 days	13-14 days	4-6 days	7-9 days	Do not Know	None	Total
Had little interest or pleasure doing things?	104	10	12	29	16	5	224	400
Felt down, depressed or hopeless?	108	12	16	29	13	4	219	401
Had trouble falling asleep or staying asleep or sleeping too much?	122	25	52	42	29	1	131	402
Felt tired or had little energy?	158	30	41	53	39	0	78	399
Felt bad about yourself or that you were a failure or had let yourself or your family down?	70	11	21	23	11	1	267	404

Question 32

Has a doctor or other healthcare provider EVER told you that you have: An anxiety disorder (including acute stress disorder, anxiety, generalized anxiety disorder, OCD, panic disorder, phobia, PTSD, or social anxiety disorder)?

Total Responses = 404
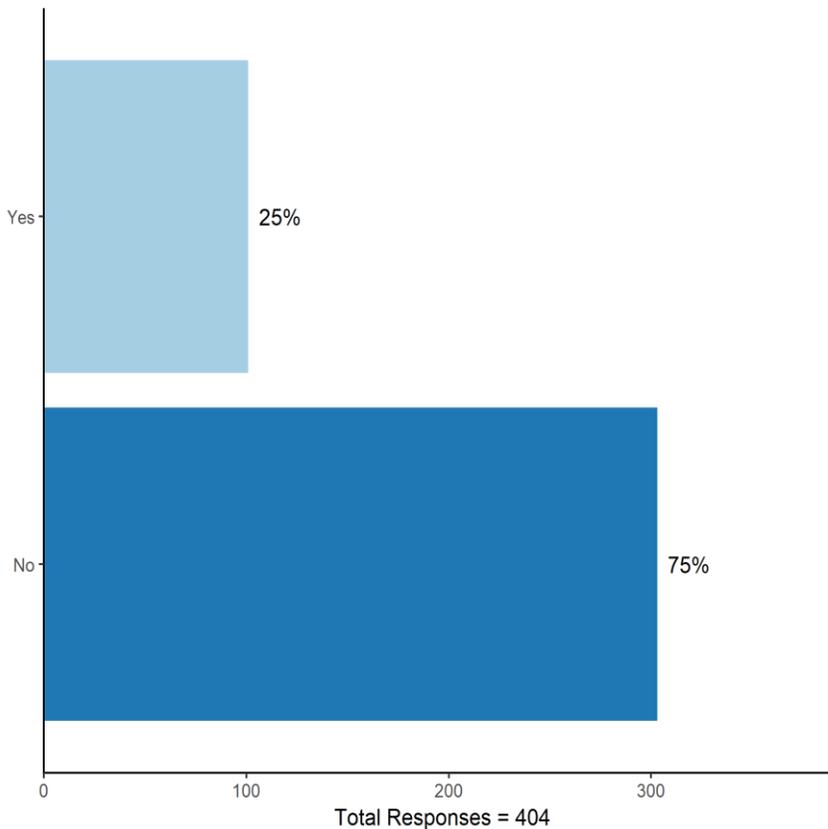
Response	Count	Percent
Yes	101	25%
No	303	75%
Total Responses	404	

Has a doctor or other healthcare provider EVER told you that you have: A depressive disorder (including depression, major depression, dysthemia, or minor depression

Total Responses = 407

Response	Count	Percent
Yes	109	26.8%
No	298	73.2%
Total Responses	407	

Question 34

During the past 12 months, have you received any treatment or counseling for any problem you were having with your emotions, nerves or mental health? Please do not include treatment for alcohol or drug use.

Total Responses = 404
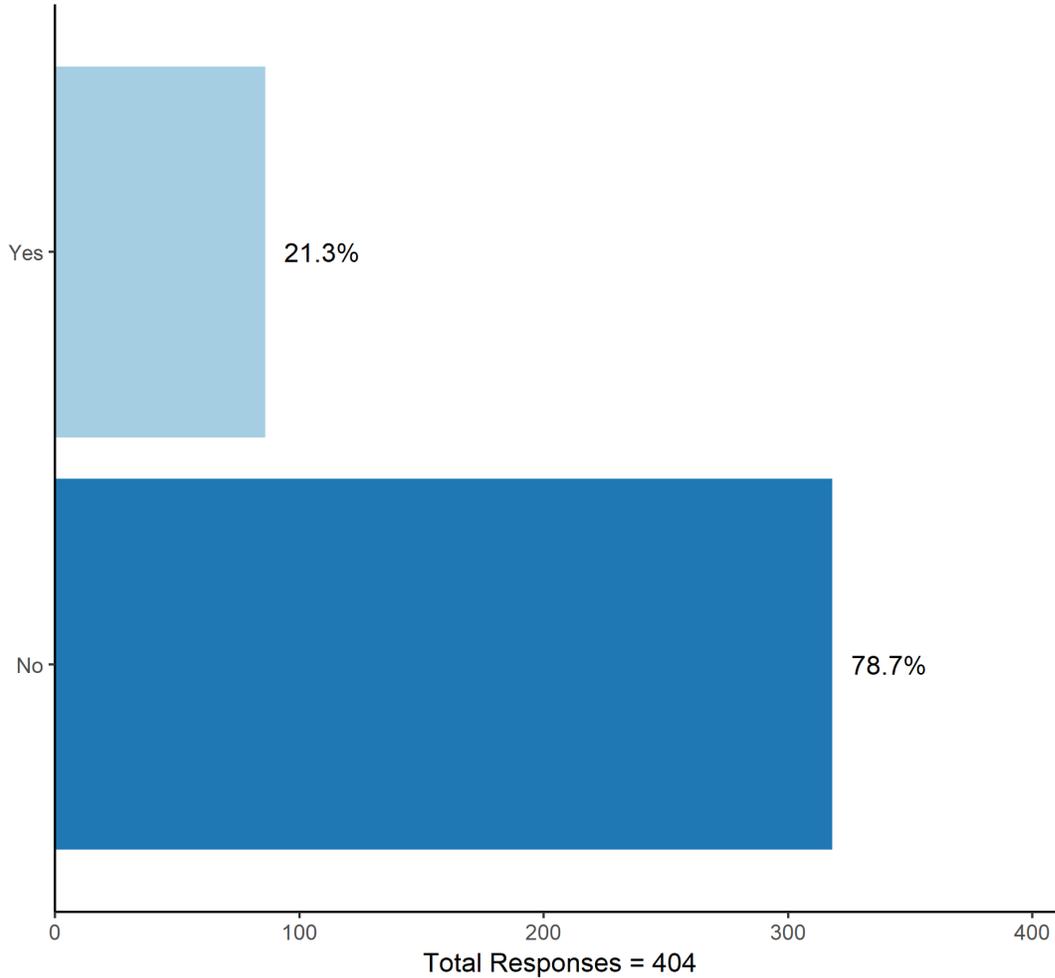
Response	Count	Percent
Yes	86	21.3%
No	318	78.7%
Total Responses	404	

Question 35

Not counting carrots, potatoes, or salad, how many SERVINGS of VEGETABLES did you eat during the PAST WEEK?

None — 1.5%

1-2 times — 12.8%

3-4 times — 19%

5-7 times — 32.8%

8 or more servings — 33.7%

Never eat/drink item/don't know — 0.2%

Total Responses = 406
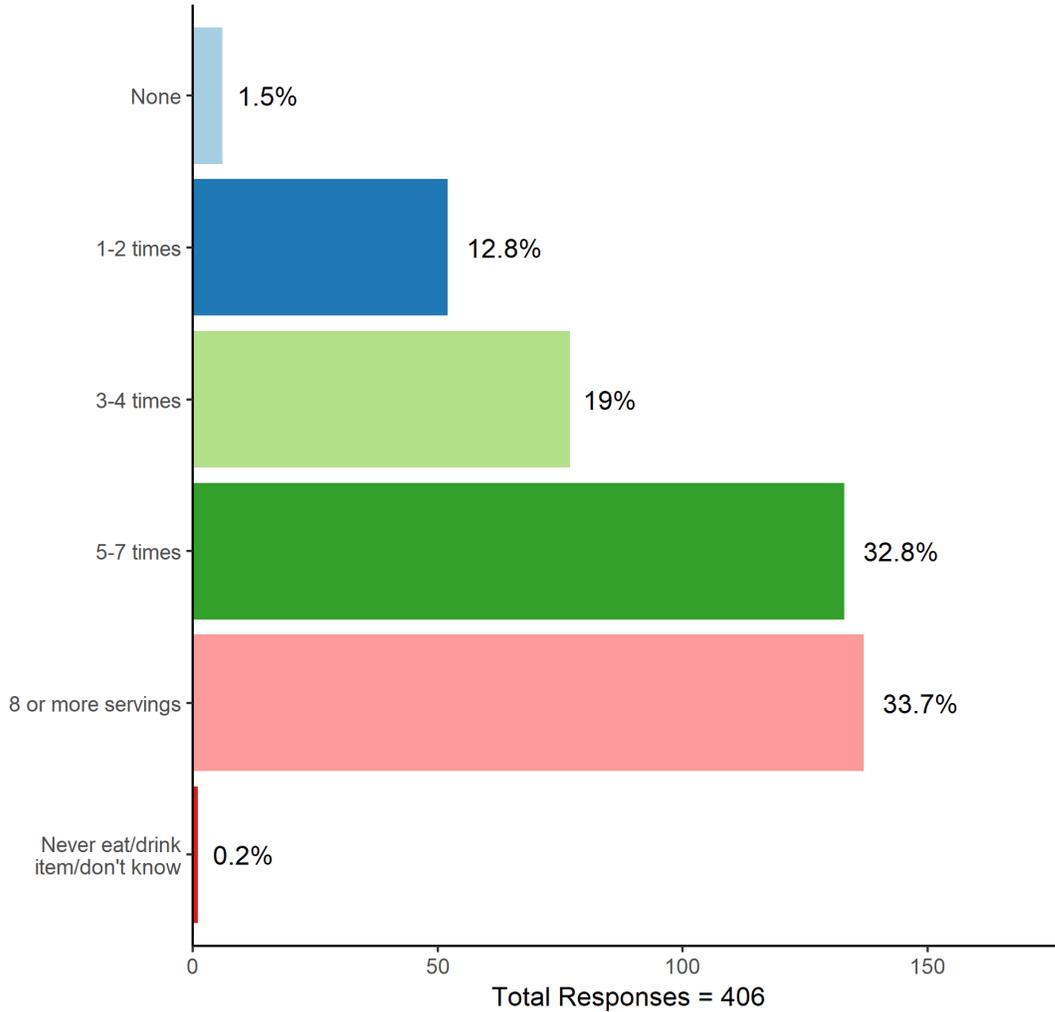
Response	Count	Percent
None	6	1.5%
1-2 times	52	12.8%
3-4 times	77	19%
5-7 times	133	32.8%
8 or more servings	137	33.7%
Never eat/drink item/don't know	1	0.2%
Total Responses	406	

Question 36

Do any of the following keep you and your family from eating more vegetables?

Does the COST keep you from eating more vegetables?
- 17.3% (Yes)
- 82.7% (No)

Does NOT HAVING TIME TO COOK keep you from eating more vegetables?
- 25.4% (Yes)
- 74.6% (No)

Does NOT KNOWING HOW TO PREPARE THEM keep you from eating more vegetables?
- 11.7% (Yes)
- 88.3% (No)

Response: Yes   No
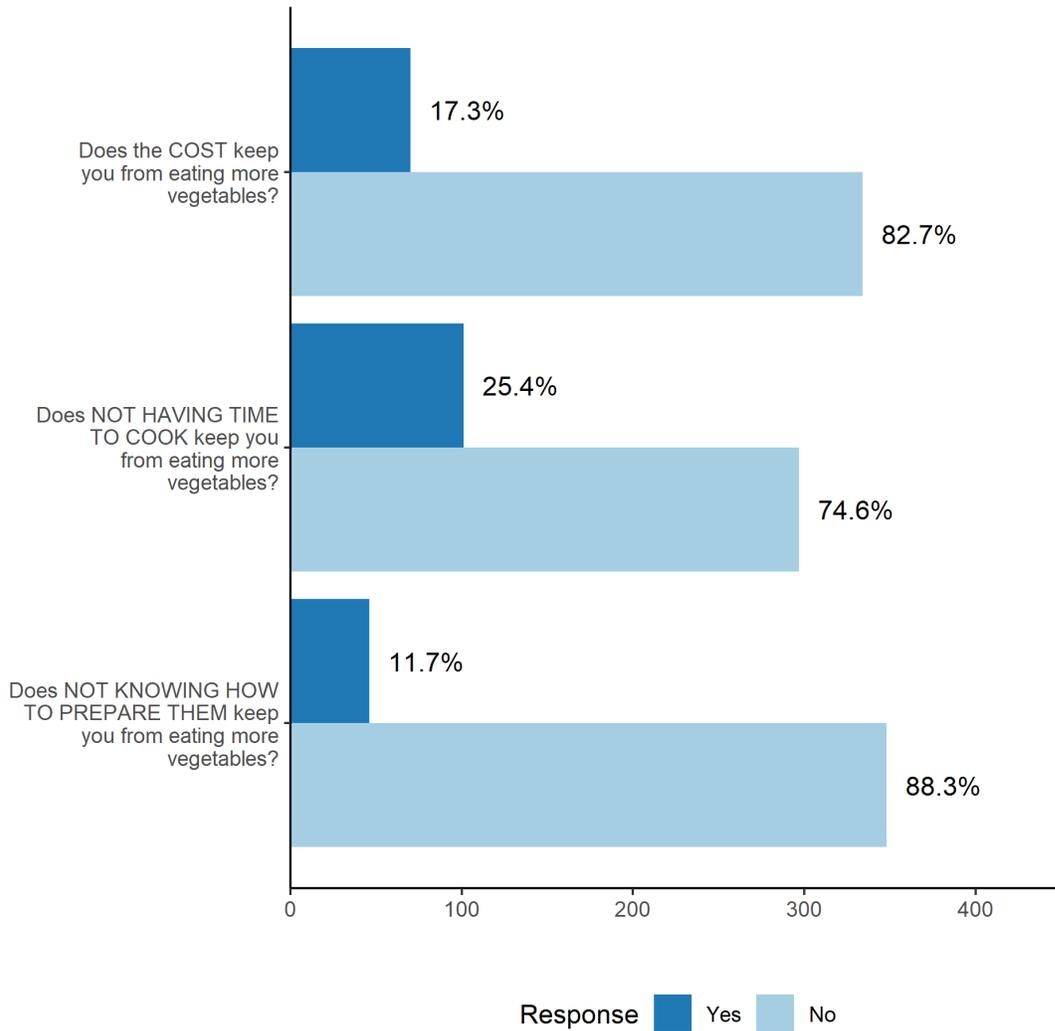
Question	No	Yes	Total
Does the COST keep you from eating more vegetables?	334	70	404
Does NOT HAVING TIME TO COOK keep you from eating more vegetables?	297	101	398
Does NOT KNOWING HOW TO PREPARE THEM keep you from eating more vegetables?	348	46	394

How many days in the past week did you purchase or receive food from the following sources?

A Senior Center or Food Pantry?
- none: 86.6%
- 5 or more days: 5.7%
- 4 days: 1%
- 3 days: 0.2%
- 1 day: 6.5%

A Wal Mart, Target, KMart or other big box store?
- none: 82.3%
- 5 or more days: 1%
- 4 days: 0.7%
- 3 days: 1.7%
- 2 days: 3.5%
- 1 day: 10.7%

A convenience store or corner store?
- none: 81.5%
- 5 or more days: 1%
- 4 days: 0.5%
- 3 days: 2%
- 2 days: 5.6%
- 1 day: 9.4%

A Farmer's Market?
- none: 60.1%
- 5 or more days: 1.8%
- 3 days: 3.6%
- 2 days: 3.8%
- 1 day: 30.8%

A grocery store such as Grocery Outlet, Safeway, Raleys?
- none: 5.2%
- 5 or more days: 16.9%
- 4 days: 8.2%
- 3 days: 15.9%
- 2 days: 24.9%
- 1 day: 28.9%

A fast food or chain restaurant?
- none: 49.9%
- 5 or more days: 2.3%
- 4 days: 2%
- 3 days: 5.3%
- 2 days: 10.1%
- 1 day: 30.5%

Response
- none
- 5 or more days
- 4 days
- 3 days
- 2 days
- 1 day

Question	1 day	2 days	3 days	4 days	5 or more days	none	Total
A Senior Center or Food Pantry?	26	1	0	4	23	348	402
A Wall Mart, Target, Kmart or other big box store?	43	14	7	3	4	330	401
A convenience store or corner store?	37	22	8	2	4	321	394
A Farmer's Market?	121	15	14	0	7	236	393
A grocery store such as Grocery Outlet, Safeway, Raley's?	116	100	64	33	68	21	402
A fast food or chain restaurant?	121	40	21	8	9	198	397

Question 38

Some people play the role of caregiver as part of their daily lives, which means they are responsible for meeting the physical and psychological needs of others. Do you act as a caregiver for another ADULT, such as spouse, sibling, aunt, uncle, parent or grandparent?

Total Responses = 402
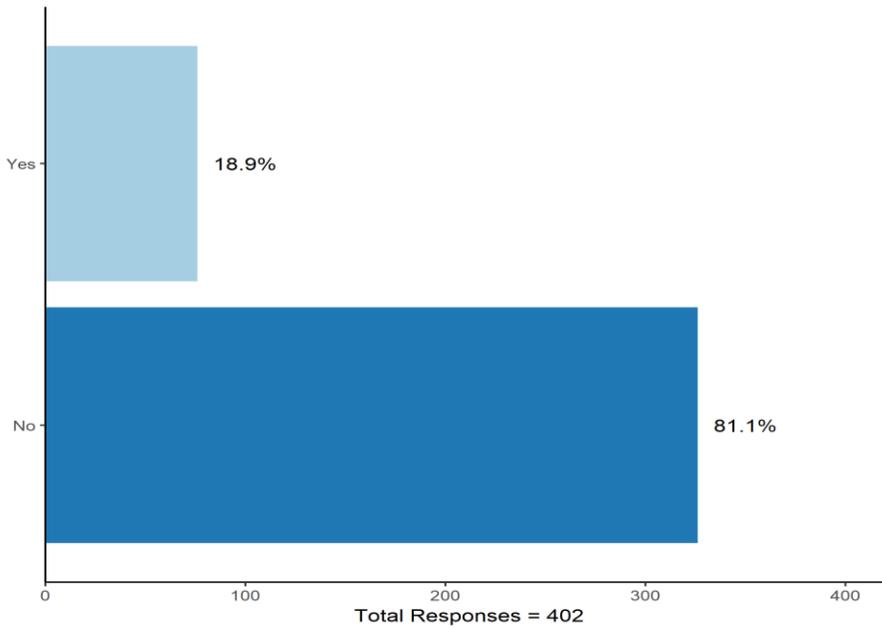
Response	Count	Percent
Yes	76	18.9%
No	326	81.1%
Total Responses	402	

Do you have:

| Response | Yes | No | Don't Know, Not Sure |
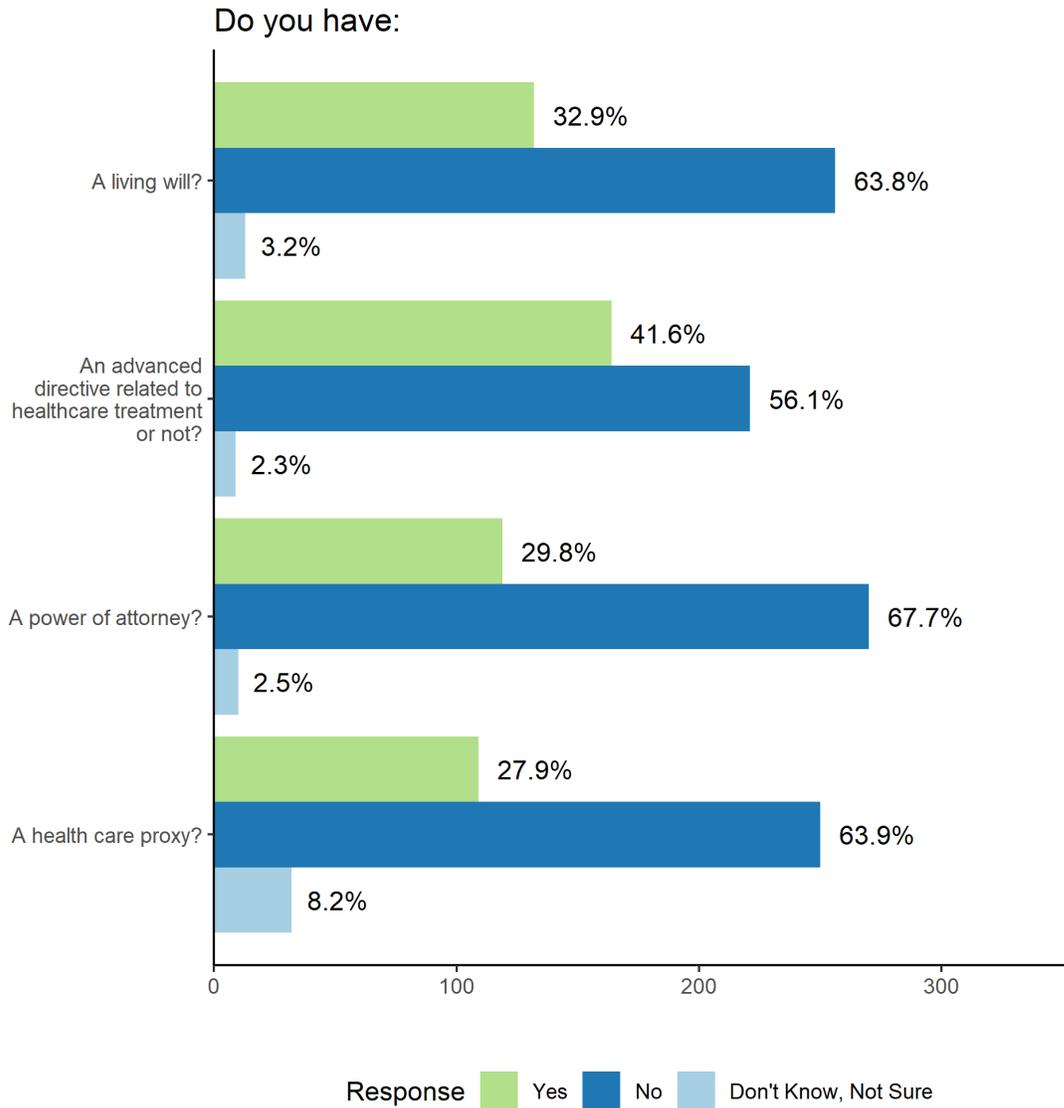
Question	Don't Know, Not Sure	No	Yes	Total
A living will?	13	256	132	401
An advanced directive related to healthcare treatment or not?	9	221	164	394
A power of attorney?	10	270	119	399
A healthcare proxy?	32	250	109	391

Question 40

What do you think are the three biggest health problems in your community?

Category	Percentage
Housing that is adequate, safe and affordable	16.6%
Mental health problems	16.1%
Access to health care	10.2%
Aging problems (arthritis, hearing loss, etc.)	9%
Poverty	7.3%
Cancers	5.4%
Dementia including Alzheimer's Disease	5.1%
Lack of nutritious foods/food insecurity or hunger	4.8%
Diabetes	3.6%
Dental problems	3.3%
Heart disease and stroke	3.1%
Domestic violence	2.4%
Climate change	2.4%
High blood pressure	2.1%
Motor vehicle crash injuries	2%
Accident / unintentional injuries	1.5%
Child abuse / neglect	1.4%
Respiratory / lung disease	1%
Suicide	0.7%
Sexually transmitted diseases (STDs)	0.6%
Homicide	0.3%
Autism spectrum disorders	0.3%
Rape/sexual assault	0.3%
Infectious disease (e.g. Hepatitis, TB)	0.2%
Firearm-related injuries	0.2%

Response	Count	Percent
Housing that is adequate, safe and affordable	190	16.6%
Mental health problems	184	16.1%
Access to healthcare	117	10.2%
Aging problems (arthritis, hearing loss, etc.)	103	9%
Poverty	84	7.3%
Cancers	62	5.4%
Dementia including Alzheimer's Disease	58	5.1%
Lack of nutritious foods/food insecurity or hunger	55	4.8%
Diabetes	41	3.6%
Dental problems	38	3.3%
Heart disease and stroke	35	3.1%
Domestic violence	28	2.4%
Climate change	27	2.4%
High blood pressure	24	2.1%
Motor vehicle crash injuries	23	2%
Accident / unintentional injuries	17	1.5%
Child abuse / neglect	16	1.4%
Respiratory / lung disease	11	1%
Suicide	8	0.7%
Sexually transmitted diseases (STDs)	7	0.6%
Autism spectrum disorders	4	0.3%
Homicide	4	0.3%
Rape/sexual assault	3	0.3%
Firearm-related injuries	2	0.2%
Infectious disease (e.g. Hepatitis, TB)	2	0.2%

Question 41

How healthy would you rate your community (the area where you live)?

Total Responses = 401
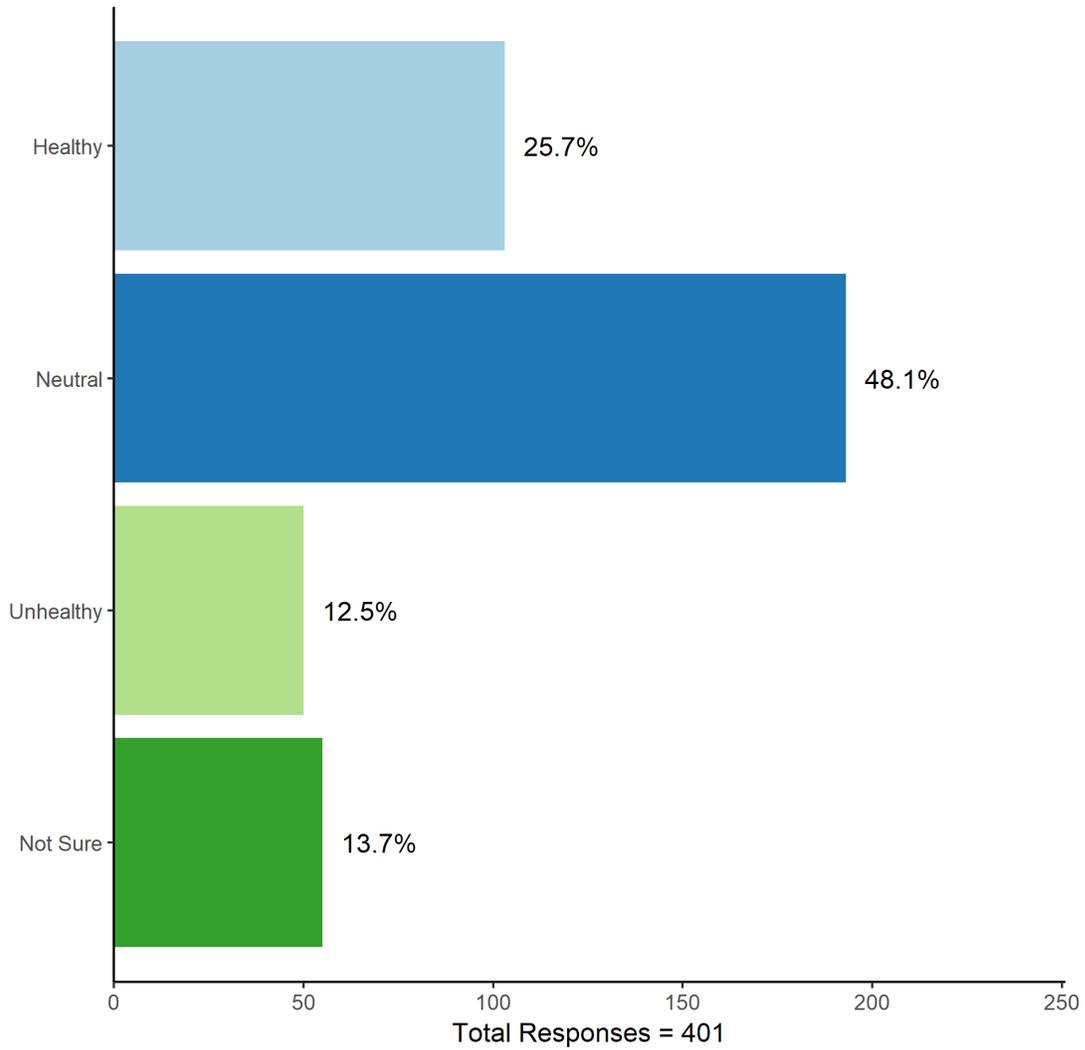
Response	Count	Percent
Healthy	103	25.7%
Neutral	193	48.1%
Unhealthy	50	12.5%
Not Sure	55	13.7%
Total Responses	401	

Question 42

There are adequate health and wellness activities in my community.
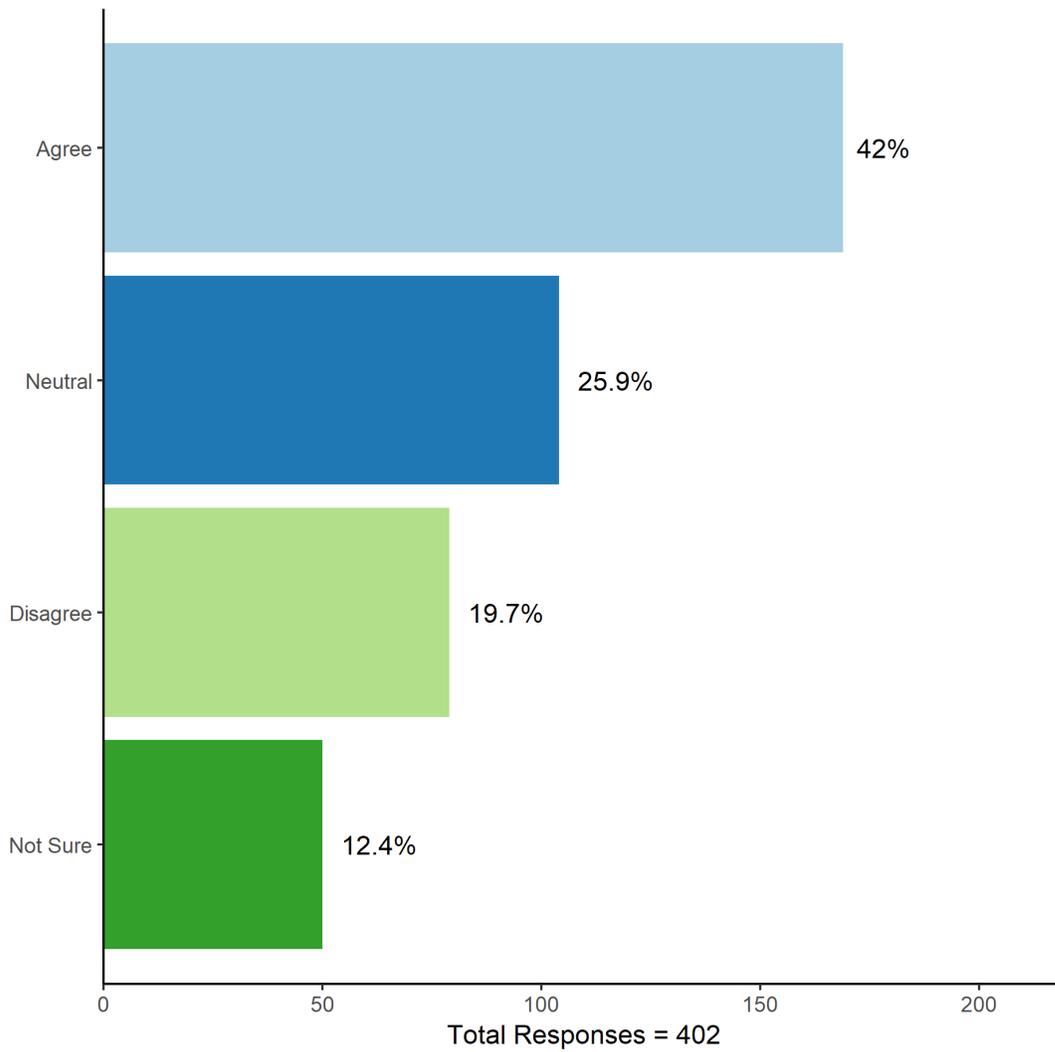
Response	Count	Percent
Agree	169	42%
Neutral	104	25.9%
Disagree	79	19.7%
Not Sure	50	12.4%
Total Responses	402	

Question 43

There are adequte cultural events in my community

Total Responses = 366
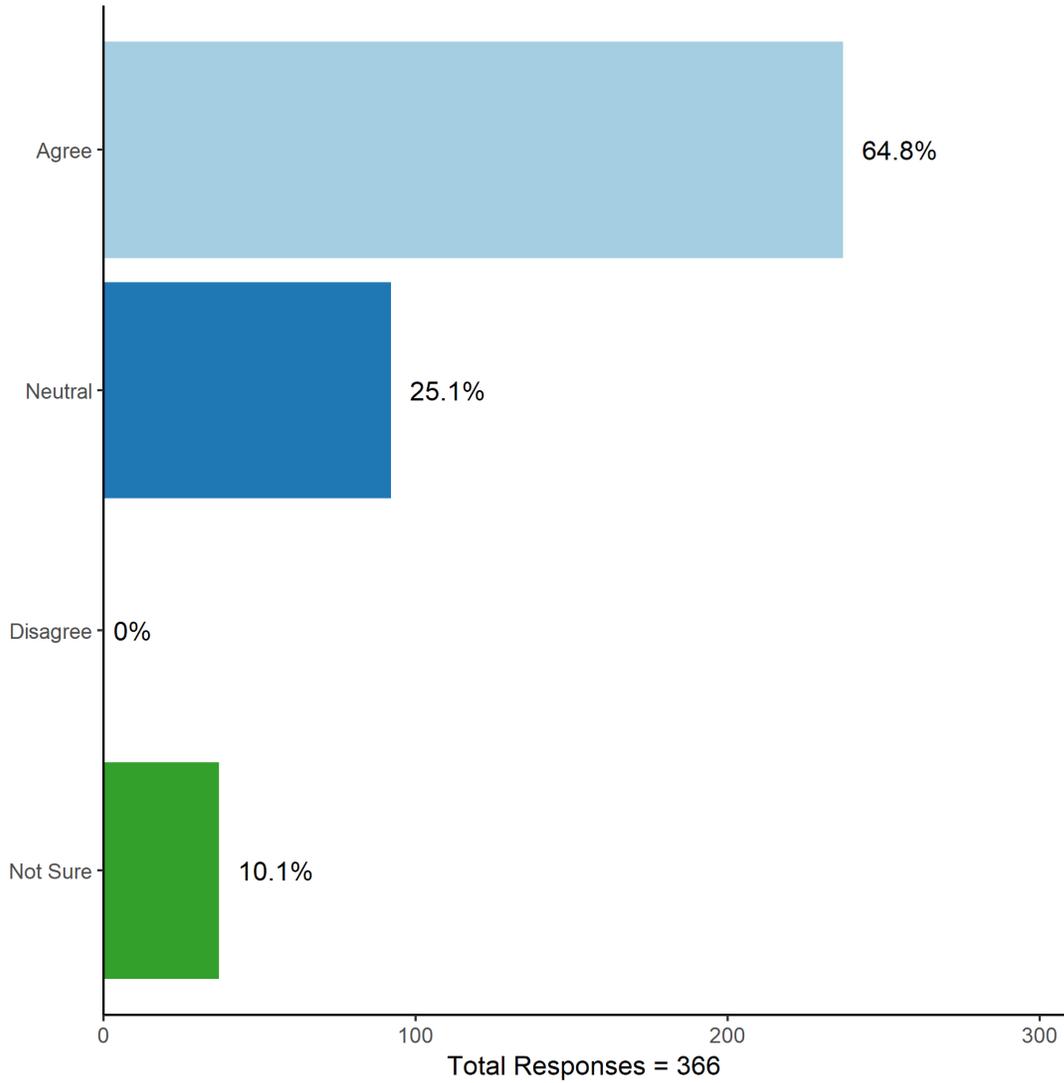
Response	Count	Percent
Agree	237	64.8%
Neutral	92	25.1%
Disagree	0	0%
Not Sure	37	10.1%
Total Responses	366	

My community is good place to raise children

Total Responses = 403
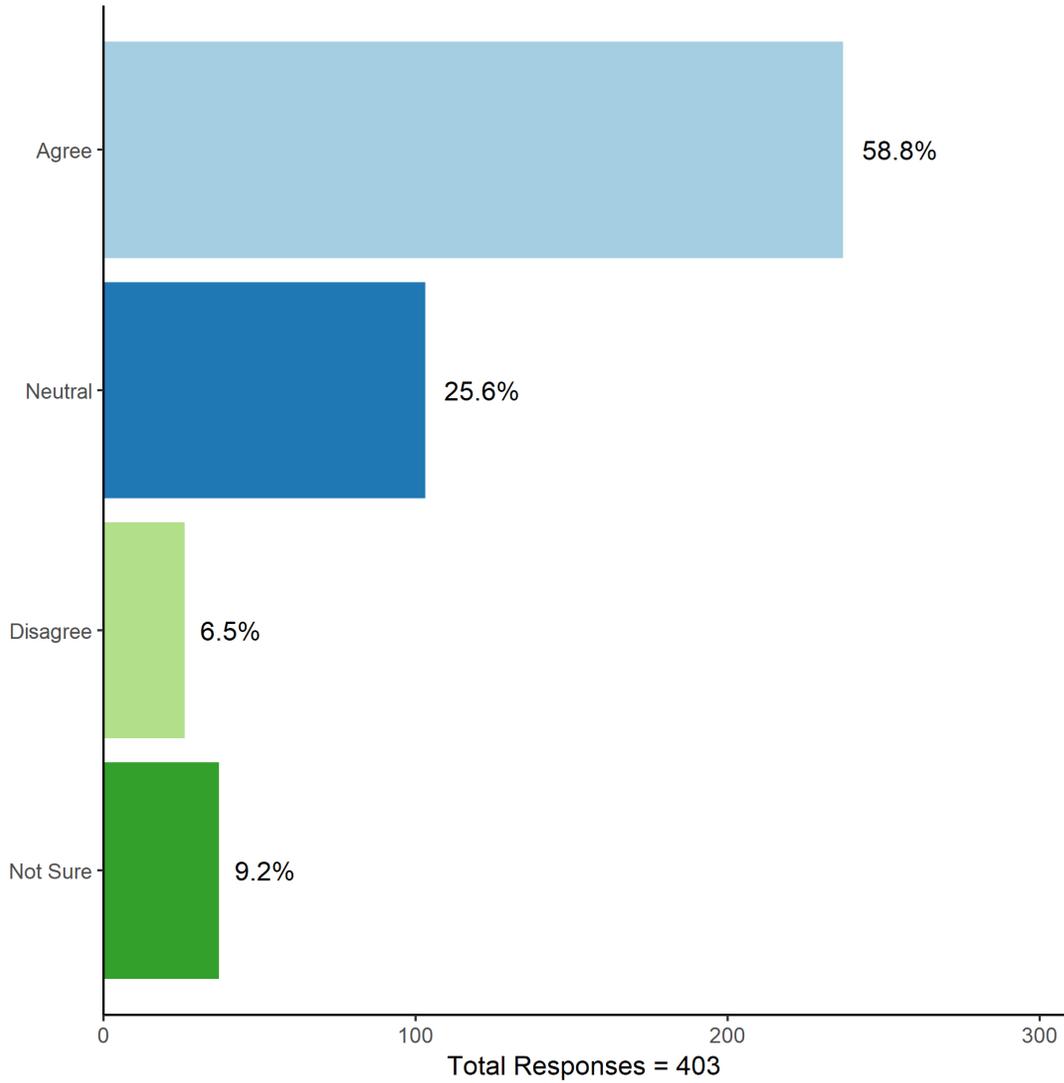
Response	Count	Percent
Agree	237	58.8%
Neutral	103	25.6%
Disagree	26	6.5%
Not Sure	37	9.2%
Total Responses	403	

My community offers plenty of other educational/ learning activities for children and youth.

Total Responses = 404
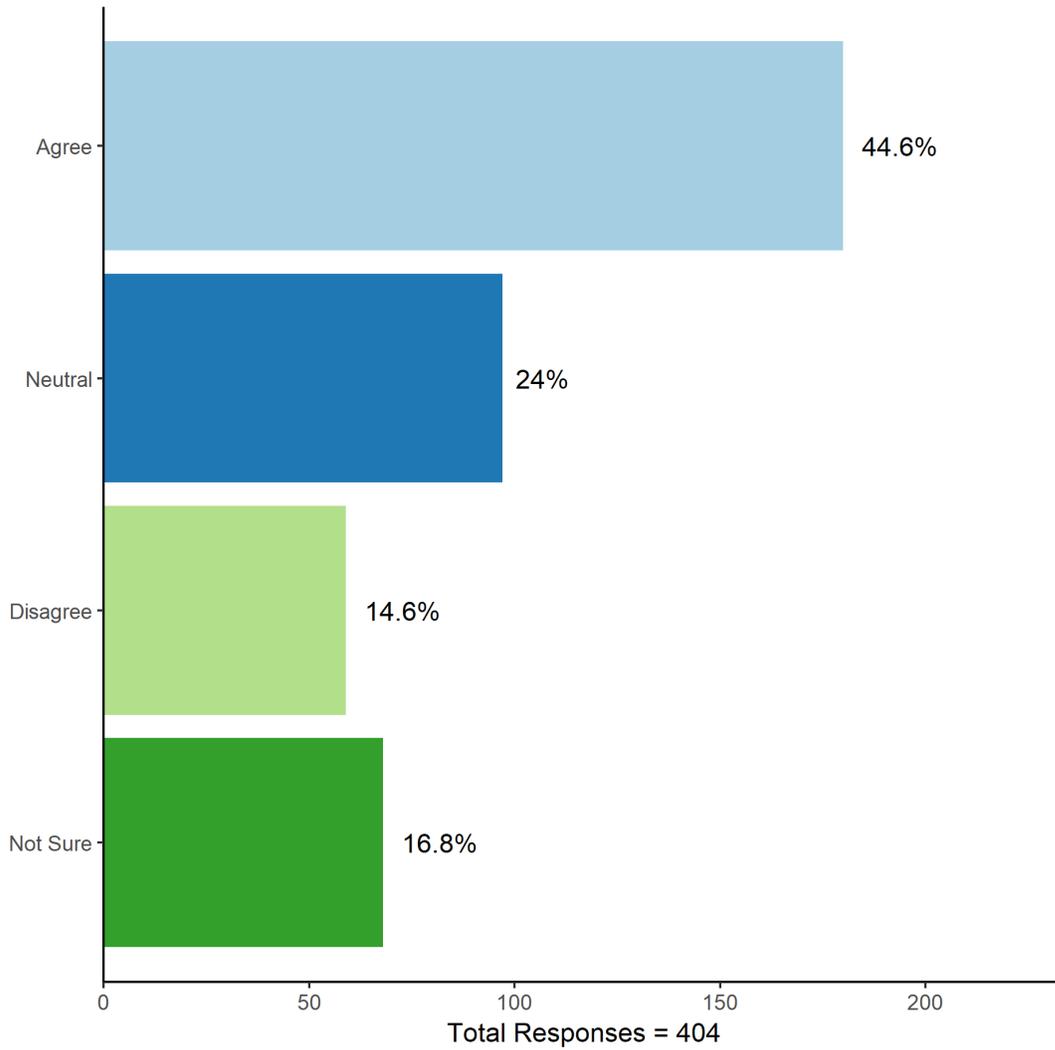
Response	Count	Percent
Agree	180	44.6%
Neutral	97	24%
Disagree	59	14.6%
Not Sure	68	16.8%
Total Responses	404	

My community is a good place to grow old.

Total Responses = 405
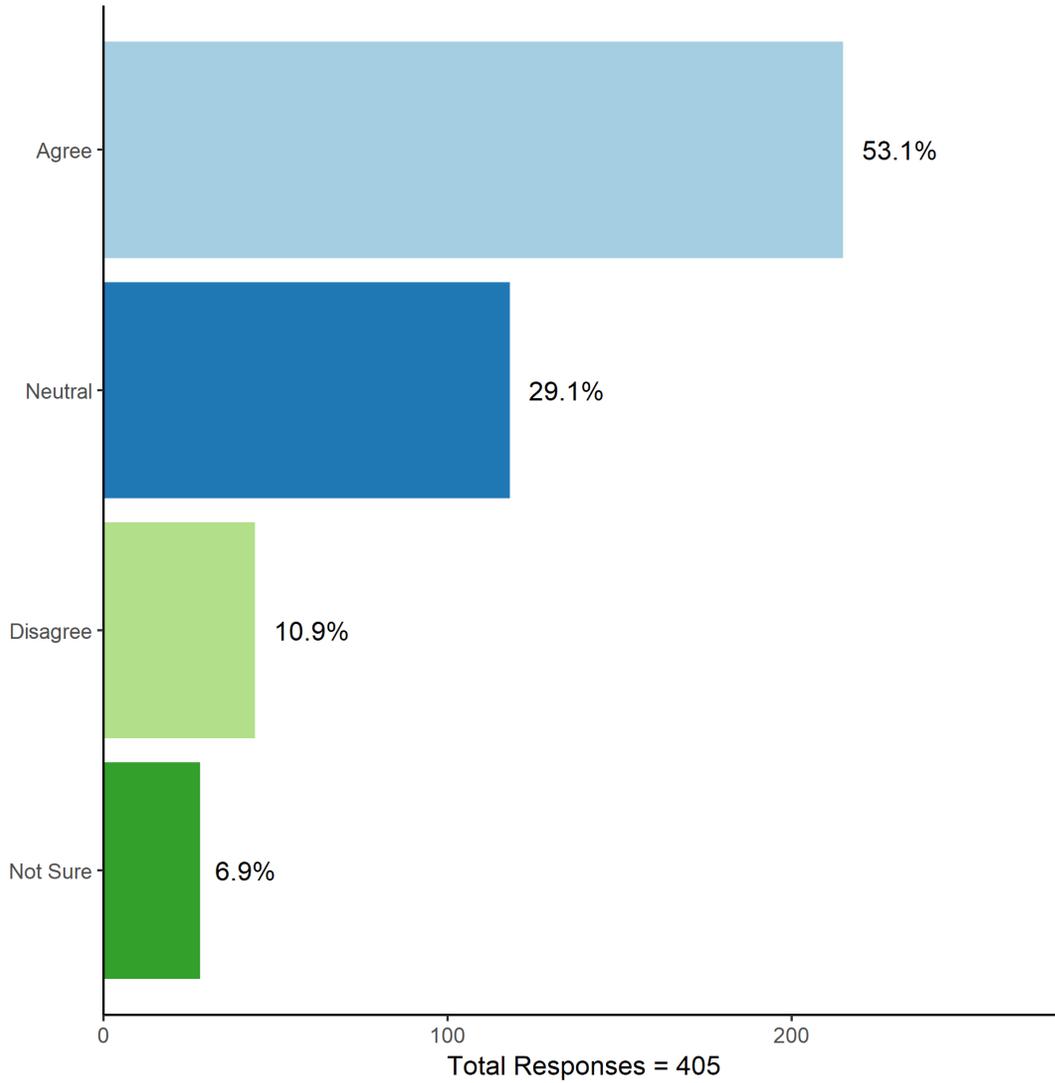
Response	Count	Percent
Agree	215	53.1%
Neutral	118	29.1%
Disagree	44	10.9%
Not Sure	28	6.9%
Total Responses	405	

In order of priority, what do you think are the THREE most significant risky behaviors in your community?
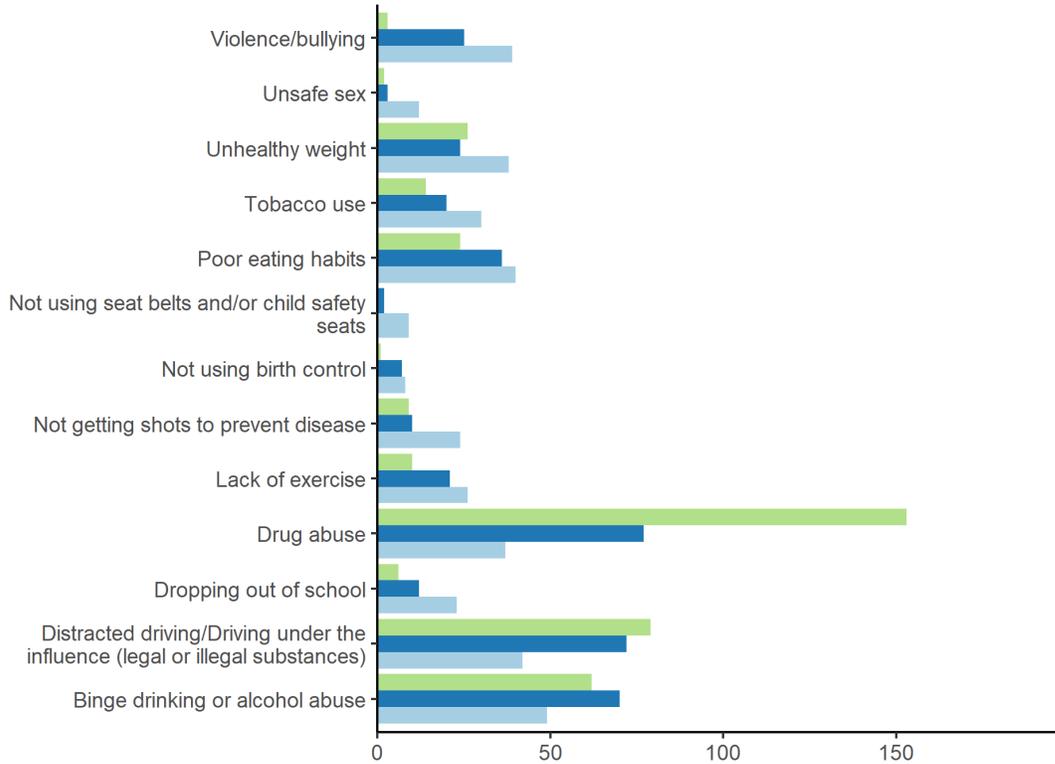
Response

- ☐ #1 - Top Priority, most significant behavior risk
- ☐ #2 - Second Priority, next highest behavior risk
- ☐ #3 - Third Priority, after #2, next highest behavior risk

Question	#1 - Top Priority, most significant behavior risk	#2 - Second Priority, next highest behavior risk	#3 - Third Priority, after #2, next highest behavior risk	Total
Binge drinking or alcohol abuse	62	70	49	181
Distracted driving/Driving under the influence (legal or illegal substances)	79	72	42	193
Dropping out of school	6	12	23	41
Drug abuse	153	77	37	267
Lack of exercise	10	21	26	57
Not getting shots to prevent disease	9	10	24	43
Not using birth control	1	7	8	16
Not using seat belts and/or child safety seats	0	2	9	11
Poor eating habits	24	36	40	100
Tobacco use	14	20	30	64
Unhealthy weight	26	24	38	88
Unsafe sex	2	3	12	17
Violence/bullying	3	25	39	67

Question 48

What do you think are the THREE most important factors for quality of life in a healthy community?

Factor	Percent
Affordable housing	20.8%
Access to health care (e.g. family doctor, dentist)	18.5%
Good jobs and healthy economy	13.5%
Access to healthy foods	7.6%
Healthy behaviors and lifestyles, e.g., healthy nutrition choices and physical activity	7%
Strong family life	5.2%
Good schools	4.7%
Clean environment	4.7%
Strong social ties	3.9%
Good place to raise children	3.9%
Religious or spiritual values	3.1%
Parks and recreation	2.3%
Transportation	2.2%
Arts and cultural events	1.6%
Low levels of child abuse	0.5%
˜Low adult death and disease rates	0.3%
Low infant deaths	0.2%

Response	Count	Percent
Affordable housing	242	20.8%
Access to healthcare (e.g. family doctor, dentist)	215	18.5%
Good jobs and healthy economy	157	13.5%
Access to healthy foods	88	7.6%
Healthy behaviors and lifestyles, e.g., healthy nutrition choices and physical activity	82	7%
Strong family life	61	5.2%
Clean environment	55	4.7%
Good schools	55	4.7%
Good place to raise children	45	3.9%
Strong social ties	45	3.9%
Religious or spiritual values	36	3.1%
Parks and recreation	27	2.3%
Transportation	26	2.2%
Arts and cultural events	19	1.6%
Low levels of child abuse	6	0.5%
~Low adult death and disease rates	3	0.3%
Low infant deaths	2	0.2%

Question 49

Which describes your race/ethnicity? Please select just one.

Total Responses = 393
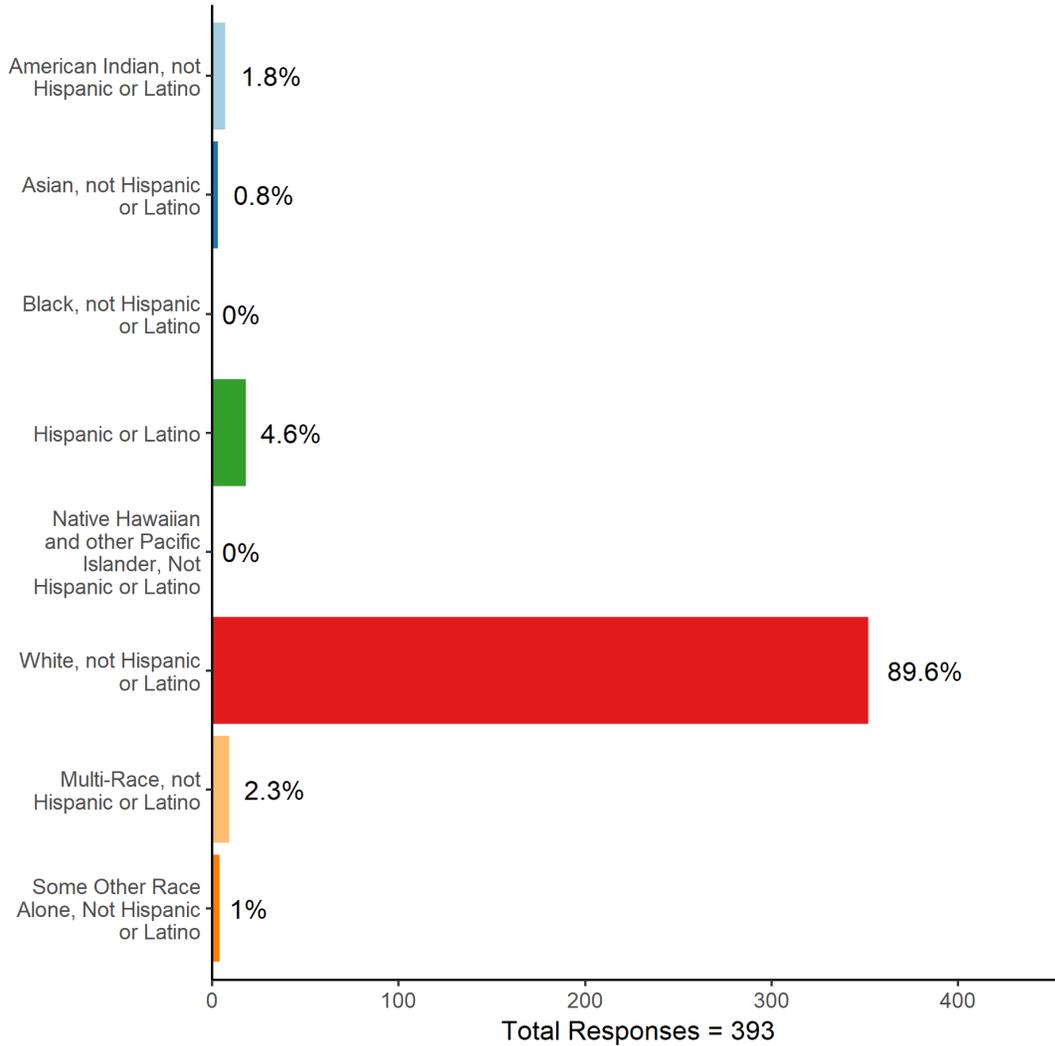
Response	Count	Percent
American Indian, not Hispanic or Latino	7	1.8%
Asian, not Hispanic or Latino	3	0.8%
Black, not Hispanic or Latino	0	0%
Hispanic or Latino	18	4.6%
Native Hawaiian and other Pacific Islander, Not Hispanic or Latino	0	0%
White, not Hispanic or Latino	352	89.6%
Multi-Race, not Hispanic or Latino	9	2.3%
Some Other Race Alone, Not Hispanic or Latino	4	1%
Total Responses	393	

Have any language, cultural barriers, or your immigration status kept you from seeking medical care in the past year?

Total Responses = 398
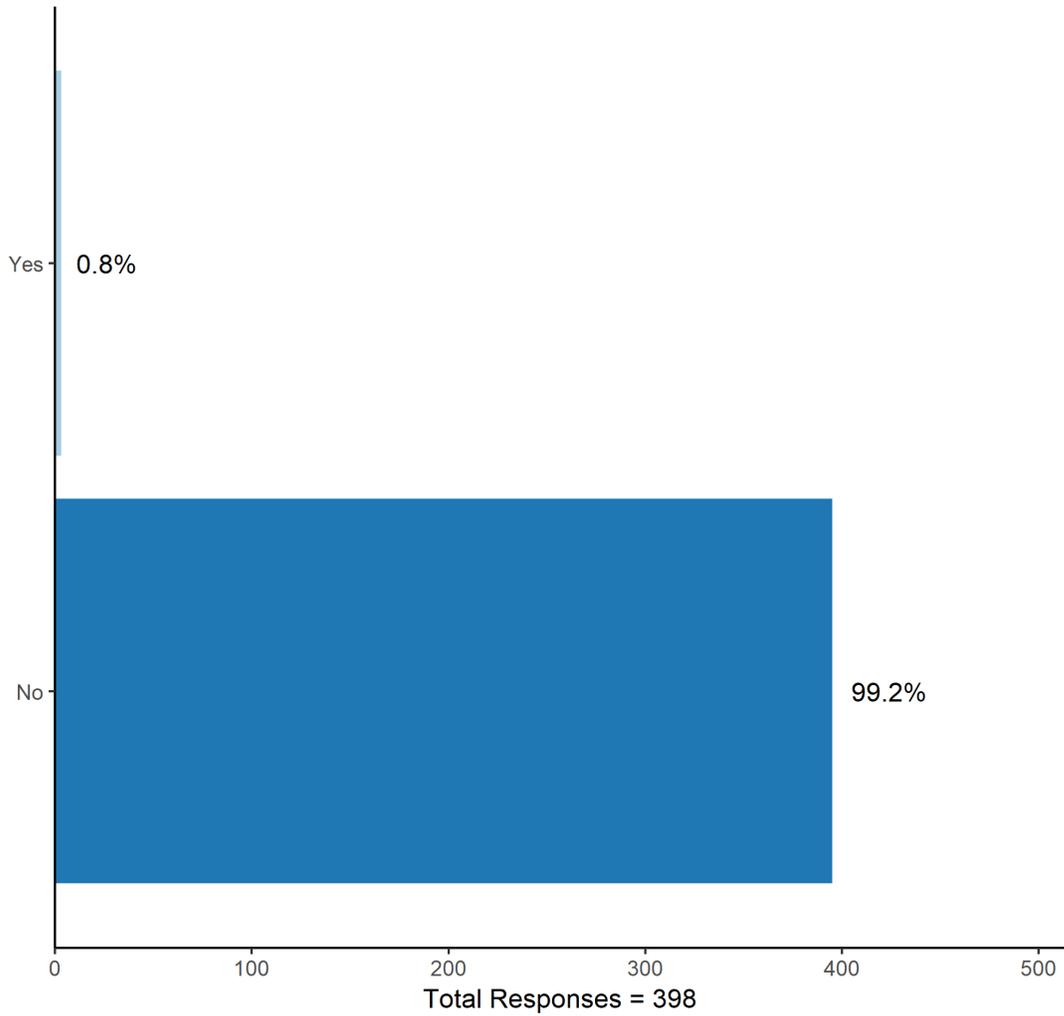
Response	Count	Percent
Yes	3	0.8%
No	395	99.2%
Total Responses	398	

Question 51

What is the highest education level you completed?

Total Responses = 399
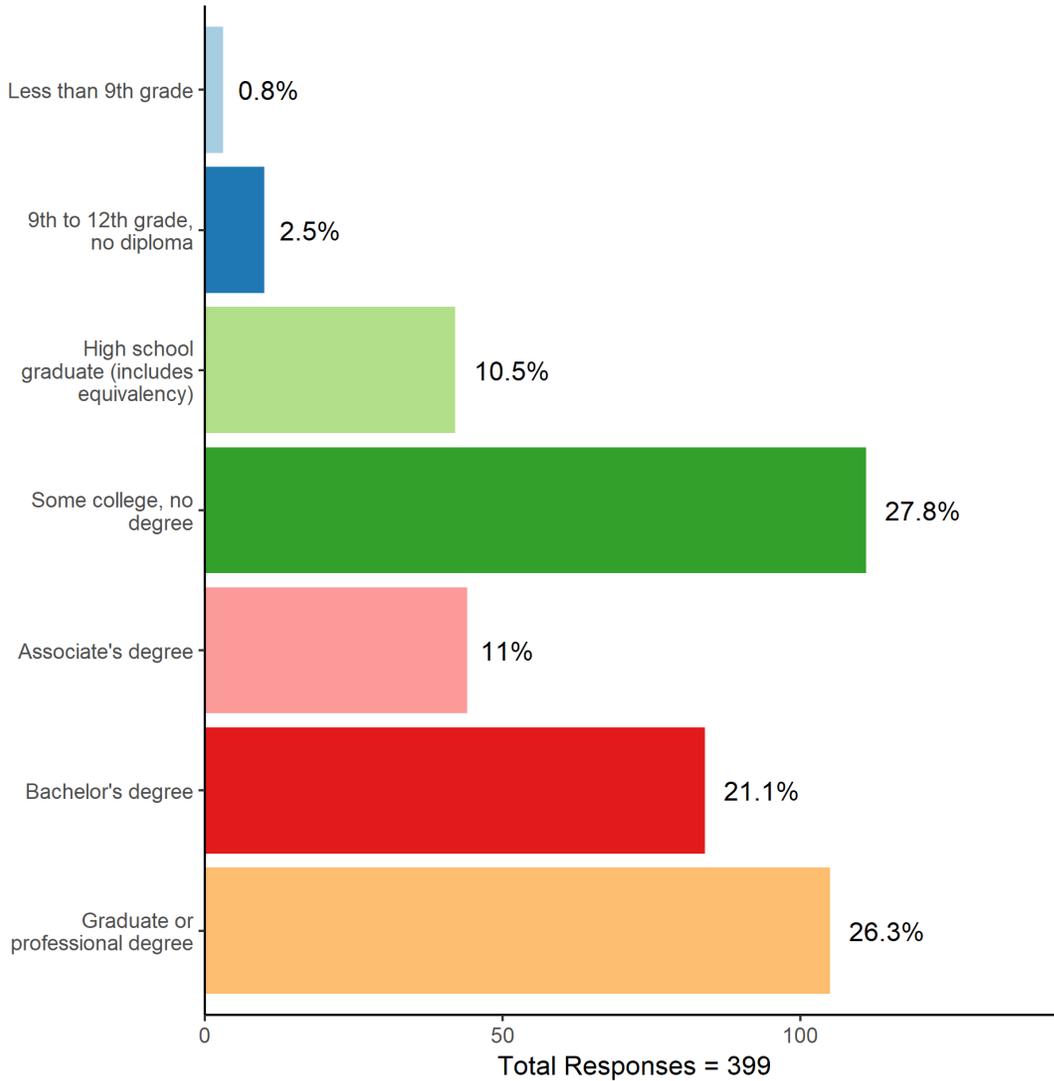
Response	Count	Percent
Less than 9th grade	3	0.8%
9th to 12th grade, no diploma	10	2.5%
High school graduate (includes equivalency)	42	10.5%
Some college, no degree	111	27.8%
Associate's degree	44	11%
Bachelor's degree	84	21.1%
Graduate or professional degree	105	26.3%
Total Responses	399	

Question 52

Are you currently

Total Responses = 398
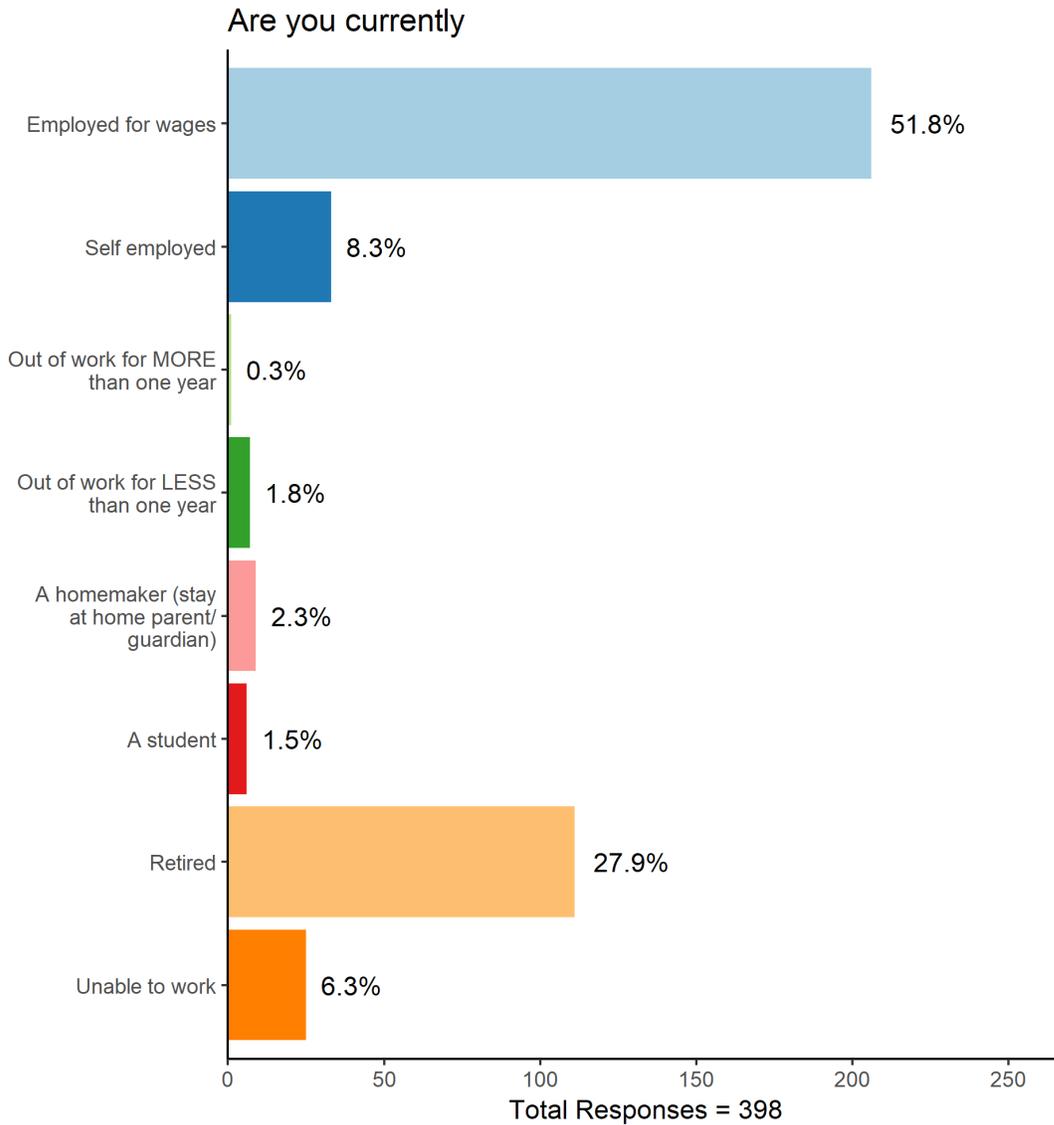
Response	Count	Percent
Employed for wages	206	51.8%
Self employed	33	8.3%
Out of work for MORE than one year	1	0.3%
Out of work for LESS than one year	7	1.8%
A homemaker (stay at home parent/guardian)	9	2.3%
A student	6	1.5%
Retired	111	27.9%
Unable to work	25	6.3%
Total Responses	398	

Question 53

Annual Income...

Total Responses = 396
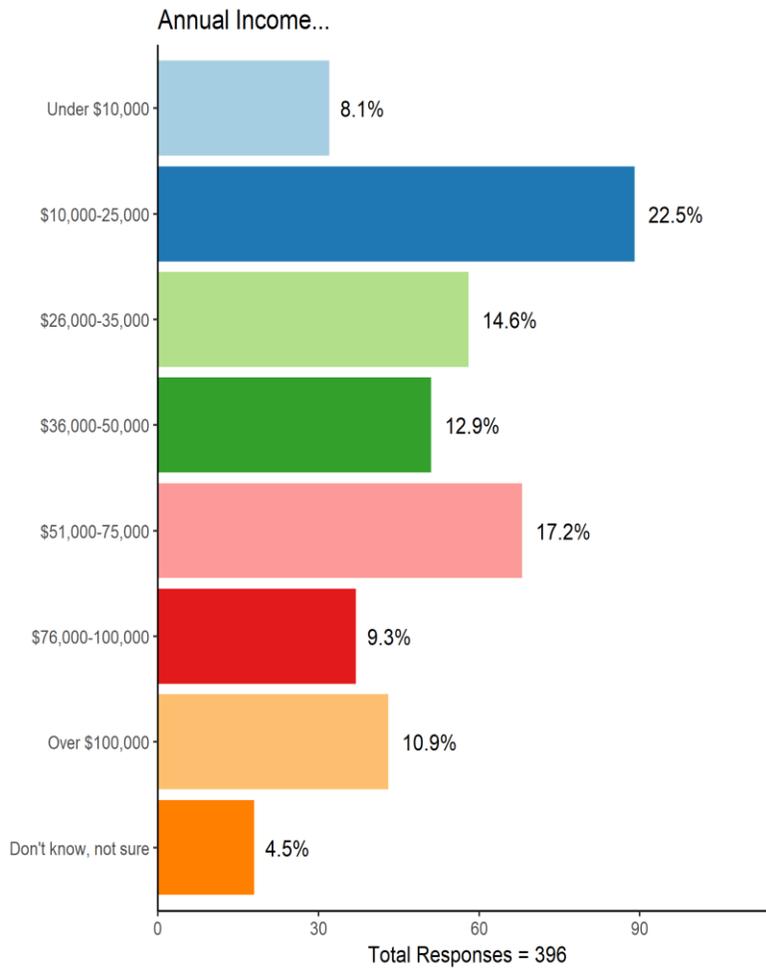
Response	Count	Percent
Under $10,000	32	8.1%
$10,000-25,000	89	22.5%
$26,000-35,000	58	14.6%
$36,000-50,000	51	12.9%
$51,000-75,000	68	17.2%
$76,000-100,000	37	9.3%
Over $100,000	43	10.9%
Don't know, not sure	18	4.5%
Total Responses	396	

Appendix C: Tahoe Forest Community Health Survey Results – 2017[31]

Below are survey responses from the Tahoe Forest Community Health Survey collected in 2017. Only questions that are similar to those collected in the Nevada County Community Health Survey 2018 as a part of this partnership work are included here. The question number and corresponding question code (in parenthesis) are provided below. Data includes only respondents from Nevada County.

Question 2 (TFHS: S1_1)

Would you say that in general your health is:
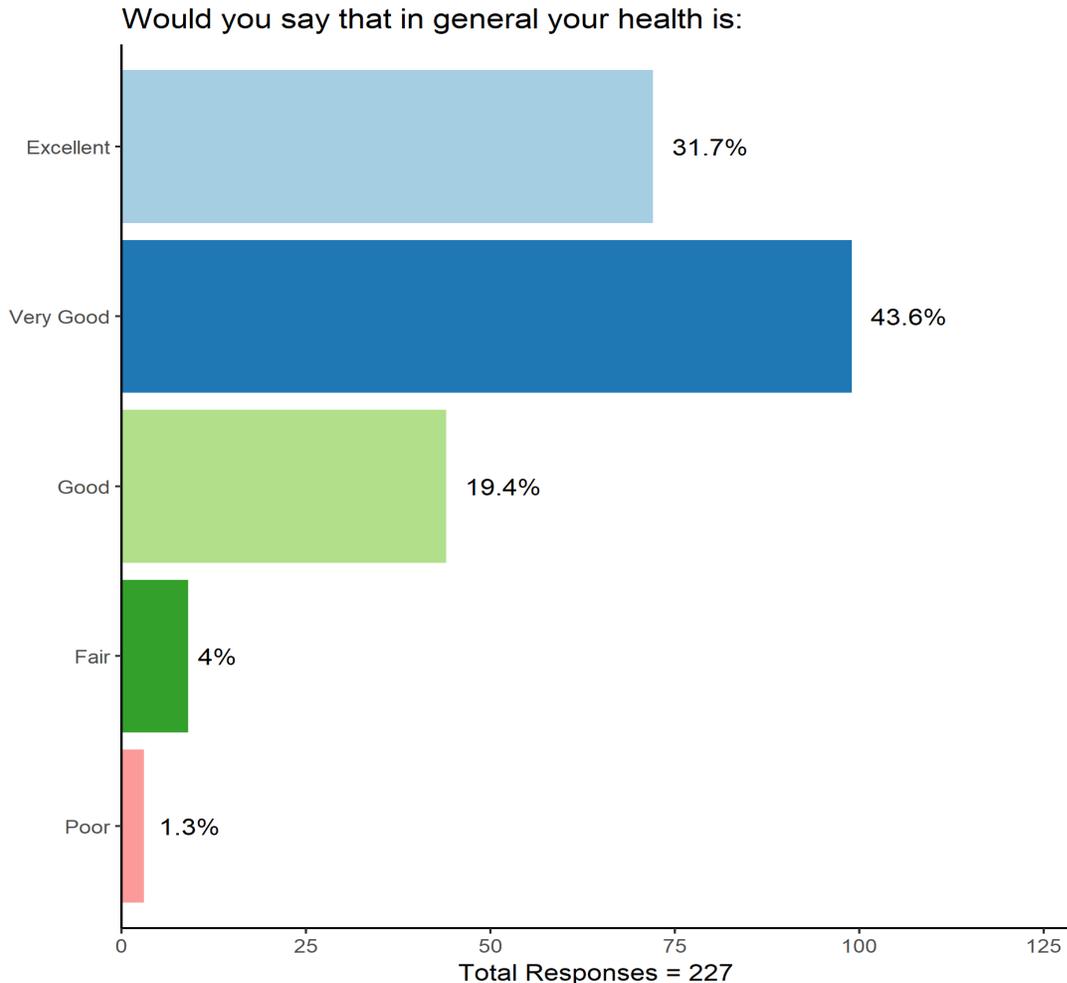
Response	Count	Percent
Excellent	72	31.7%
Very Good	99	43.6%
Good	44	19.4%
Fair	9	4%
Poor	3	1.3%
Total Responses	227	

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[31] Through a data agreement between CHI and Tahoe Forest Hospital (TFH) survey data from a 2017 CHNA assessment was acquired. The entire TFH assessment, including full survey results and instruments, can be found at: https://www.tfhd.com/sites/default/files/2018%20TFHS%20CHNA%20report%20FINAL.pdf

Question 3 (TFHS: S2_1)

Now thinking about your physical health, which includes physical illness and injury, for how many days during the past 30 days was your physical health NOT good?

Total Responses = 227
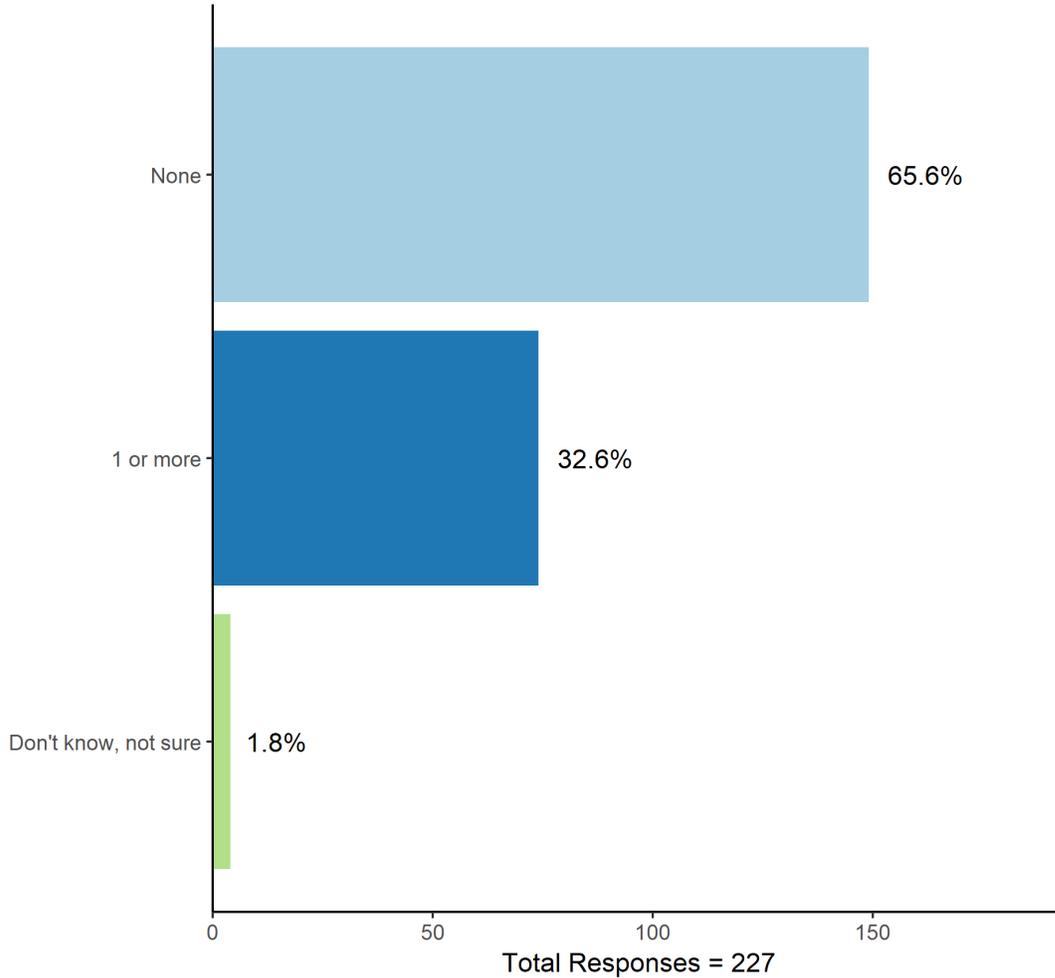
Response	Count	Percent
None	149	65.6%
1 or more	74	32.6%
Don't know, not sure	4	1.8%
Total Responses	227	

Now thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health NOT good?
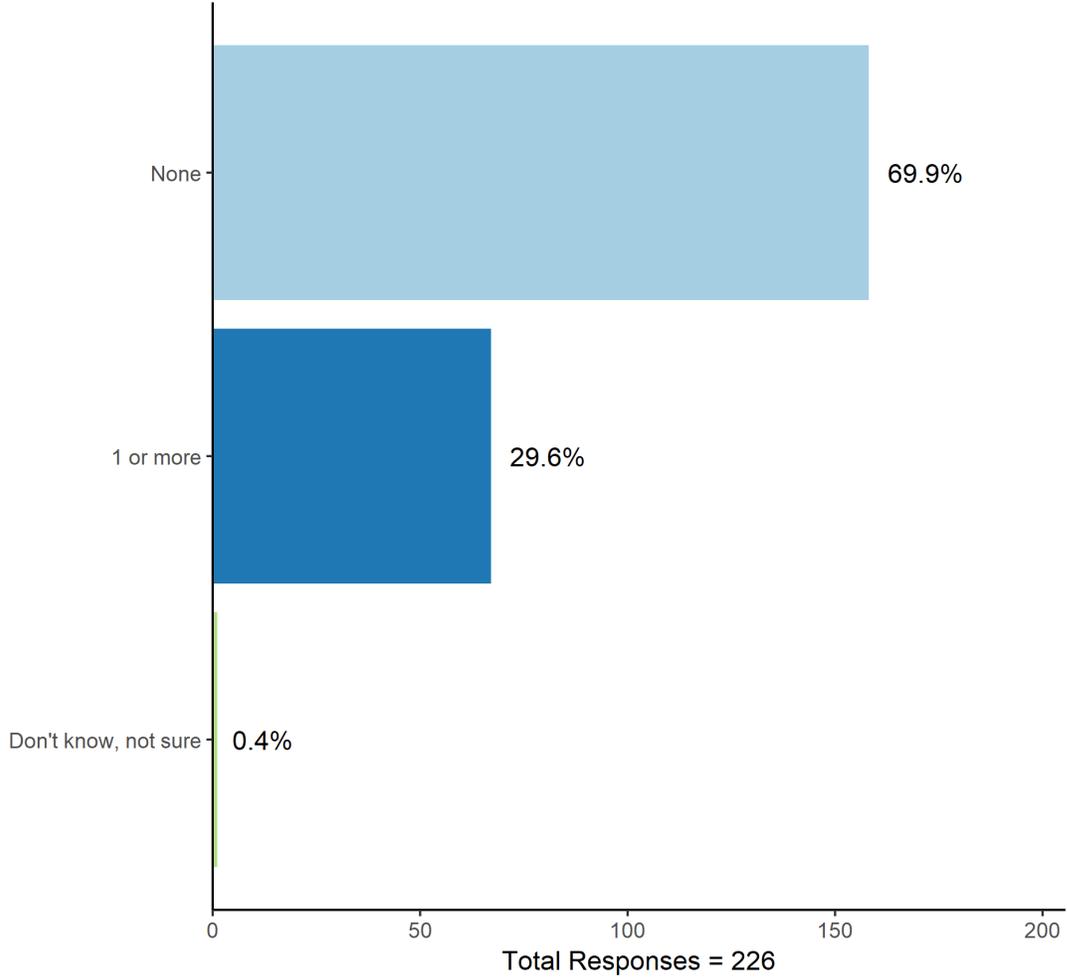
Response	Count	Percent
None	158	69.9%
1 or more	67	29.6%
Don't know, not sure	1	0.4%
Total Responses	226	

Do you have any kind of health care coverage, including health insurance from an employer or private, prepaid plans such as HMOs, or government plans such as Medicare, Medicaid or CHIP

Yes — 96.9%

No health insurance coverage — 3.1%

0   100   200

Total Responses = 227
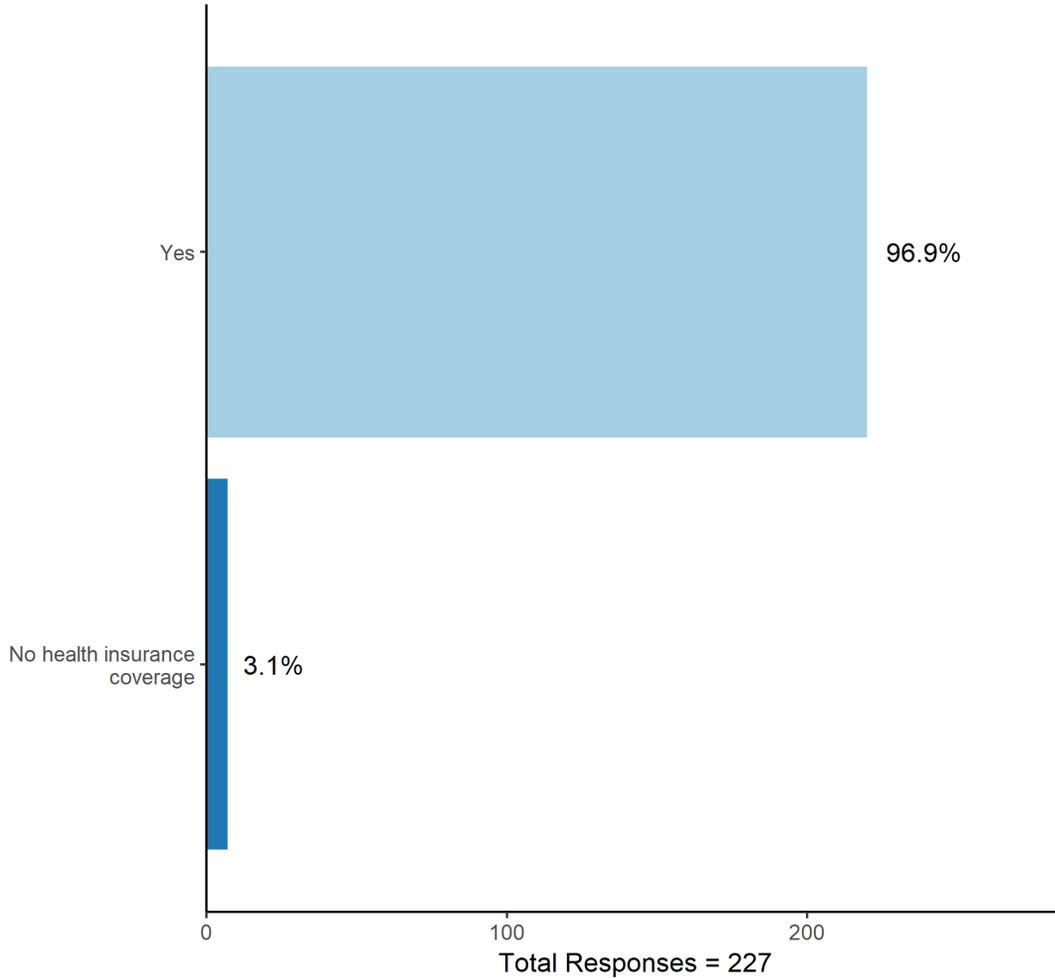
Response	Count	Percent
Yes	220	96.9%
No health insurance coverage	7	3.1%
Total Responses	227	

Do you have one person you think of as your personal doctor or health care provider?

Total Responses = 227
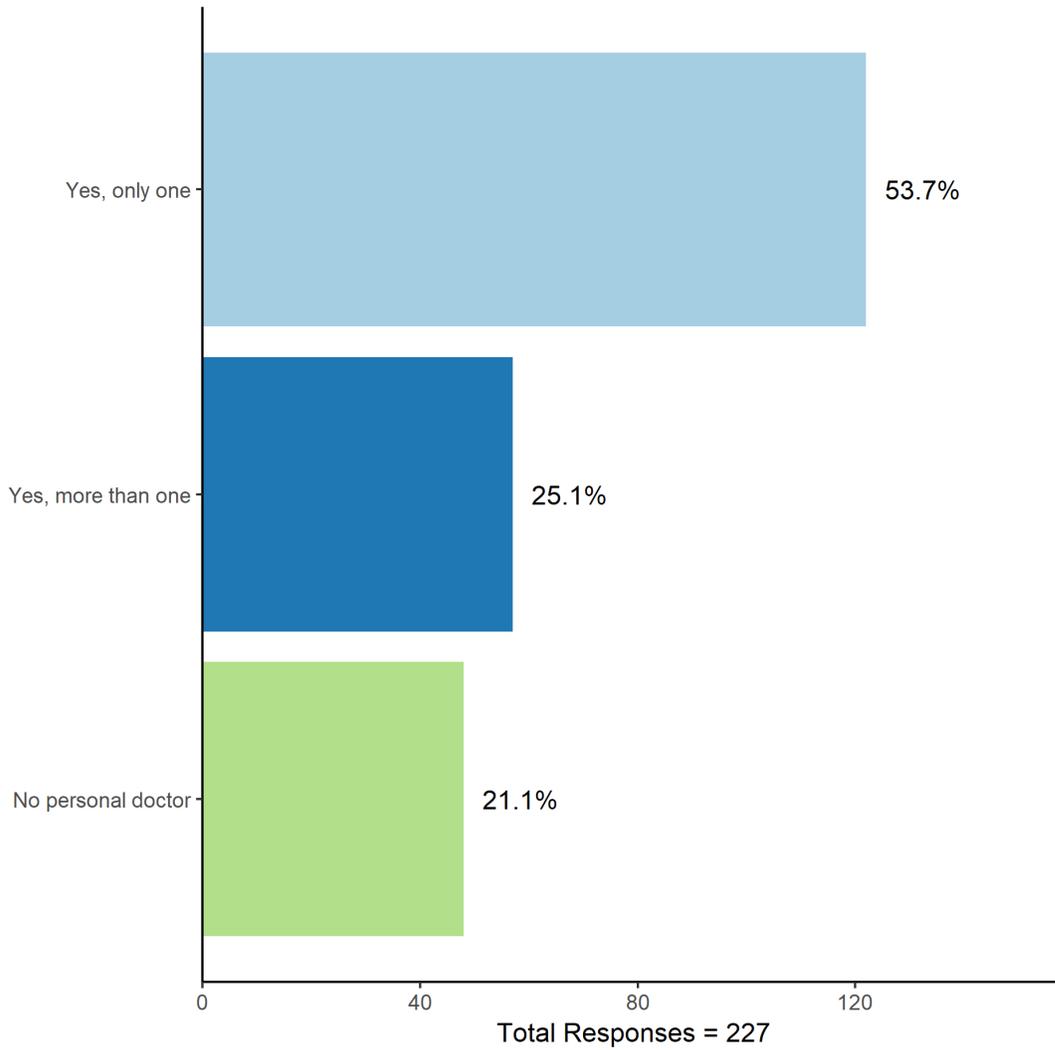
Response	Count	Percent
Yes, only one	122	53.7%
Yes, more than one	57	25.1%
No personal doctor	48	21.1%
Total Responses	227	

Which of the following BEST describes your relationship with your physician and your health care use:

I have a chronic health condition and require frequent care — 8.4%

I use health care mostly for preventive check ups and health monitoring — 54.7%

I seek out health care ONLY when I'm sick or injured — 28%

I try to avoid using the health care system as much as possible — 7.6%

I never use the health care system — 1.3%

Total Responses = 225
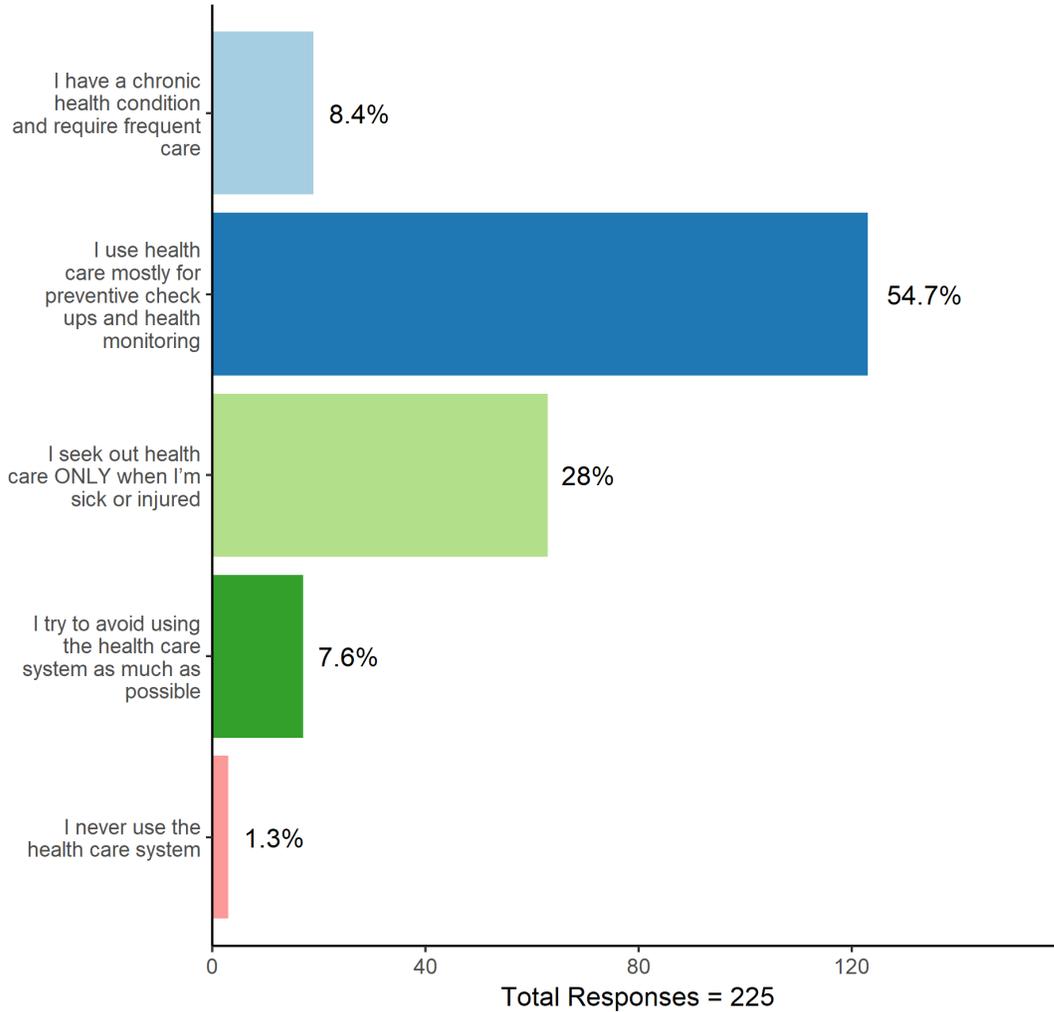
Response	Count	Percent
I have a chronic health condition and require frequent care	19	8.4%
I use healthcare mostly for preventive checkups and health monitoring	123	54.7%
I seek out healthcare ONLY when I'm sick or injured	63	28%
I try to avoid using the healthcare system as much as possible	17	7.6%
I never use the healthcare system	3	1.3%
Total Responses	225	

Has a lack of transportation kept you from getting to a doctors office or to any other health care appointment during the PAST YEAR?

Total Responses = 227
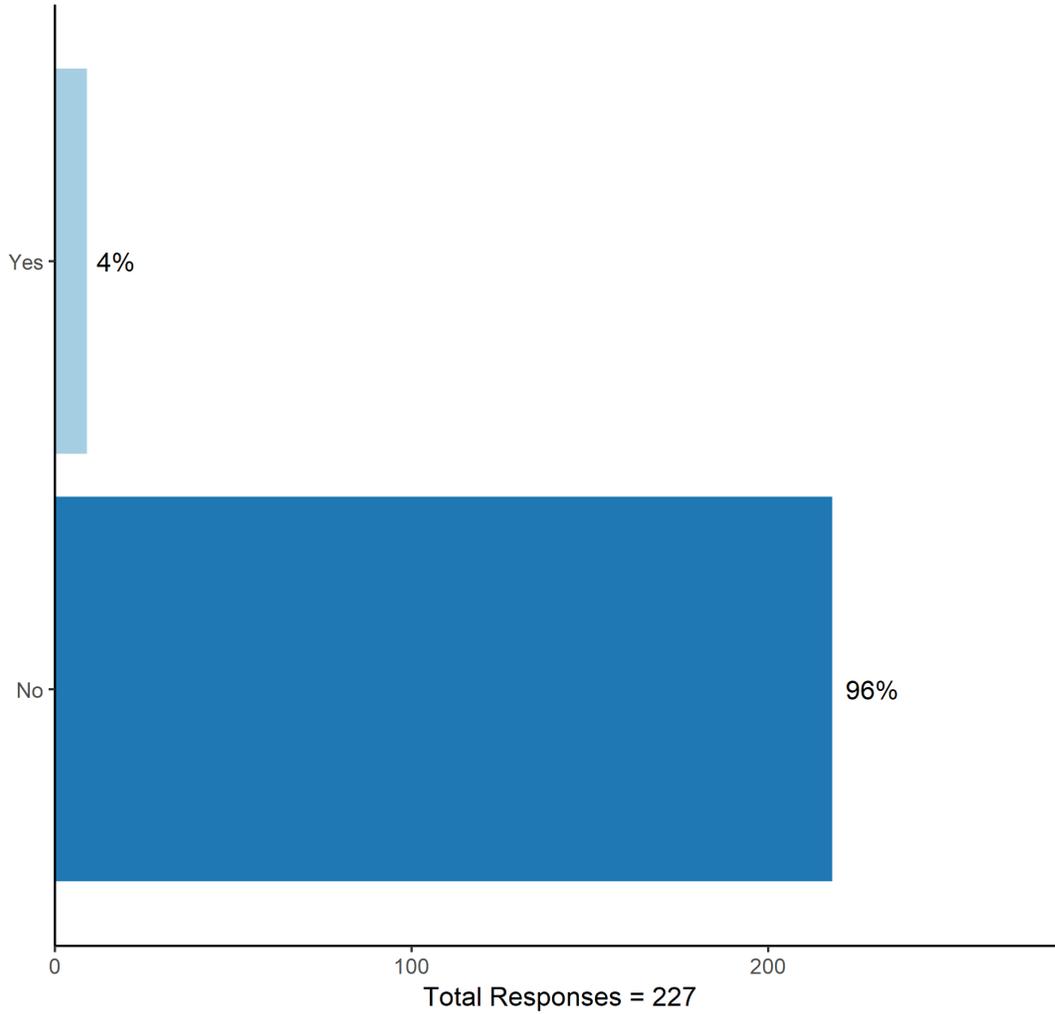
Response	Count	Percent
Yes	9	4%
No	218	96%
Total Responses	227	

During the past month, other than your regular job, did you participate in any physical activities or exercises such as running, calisthenics, golf, gardening, or walking for exercise?

Total Responses = 227
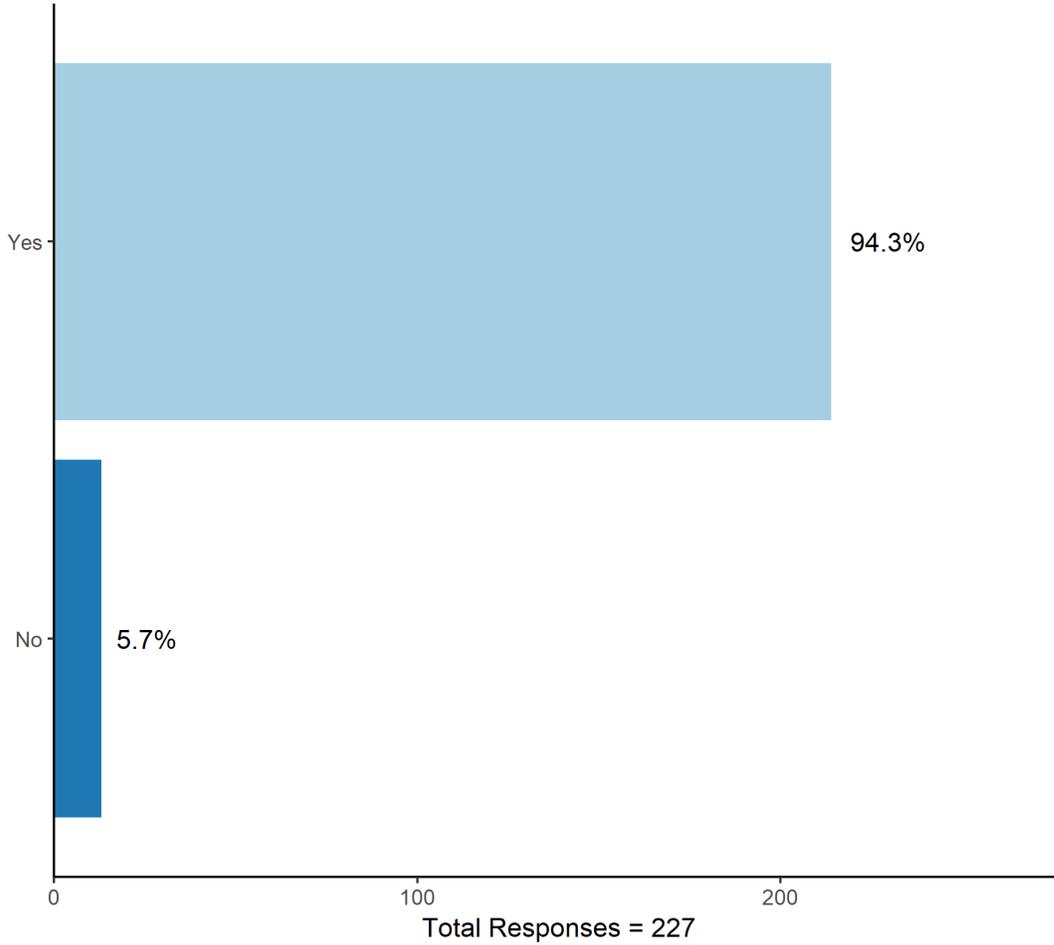
Response	Count	Percent
Yes	214	94.3%
No	13	5.7%
Total Responses	227	

Have you ever been told by a doctor that you have diabetes?

Total Responses = 227
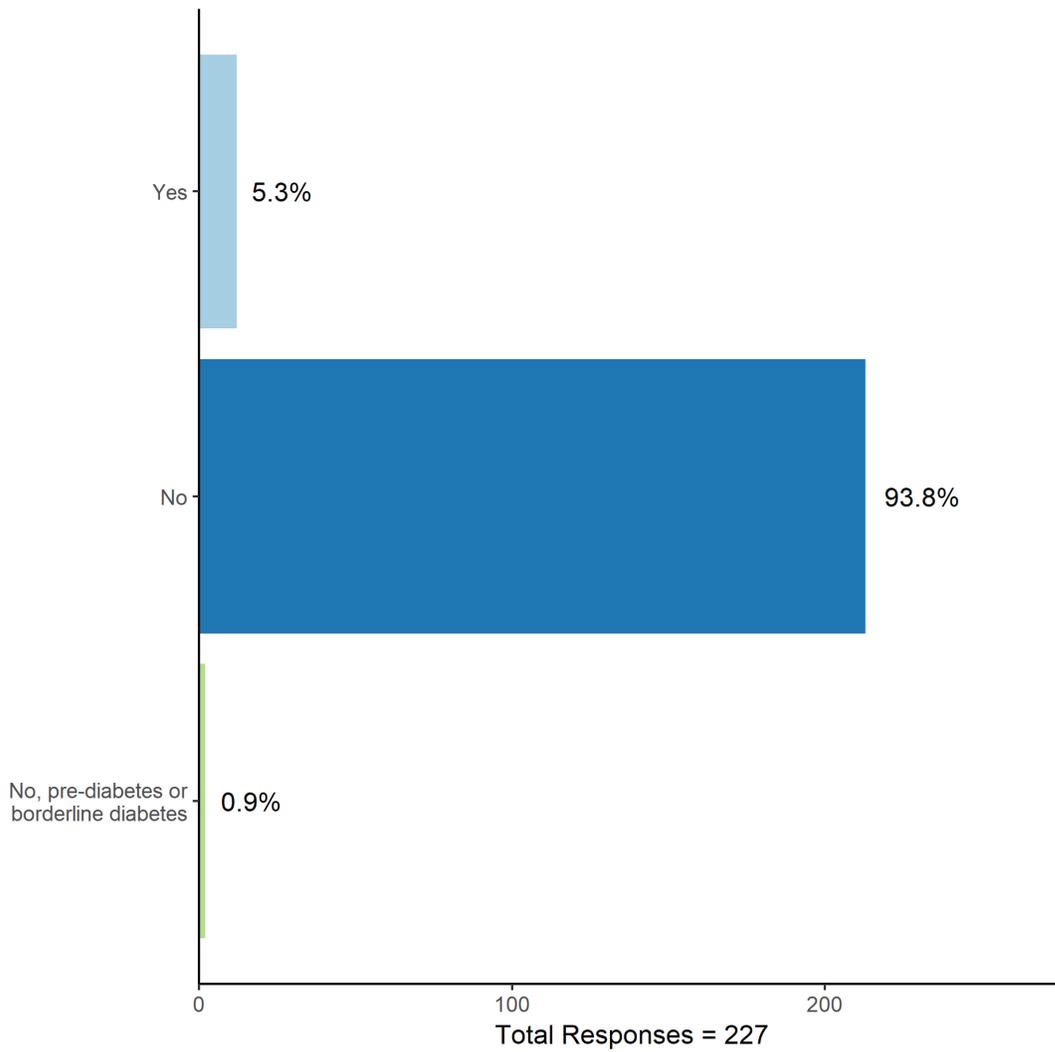
Response	Count	Percent
Yes	12	5.3%
No	213	93.8%
No, prediabetes or borderline diabetes	2	0.9%
Total Responses	227	

Question 12 (TFHS: S8_1-S8_4)

Has a doctor, nurse, or other health professional EVER told you that you had:

| Response | Yes | No | Do Not Know |
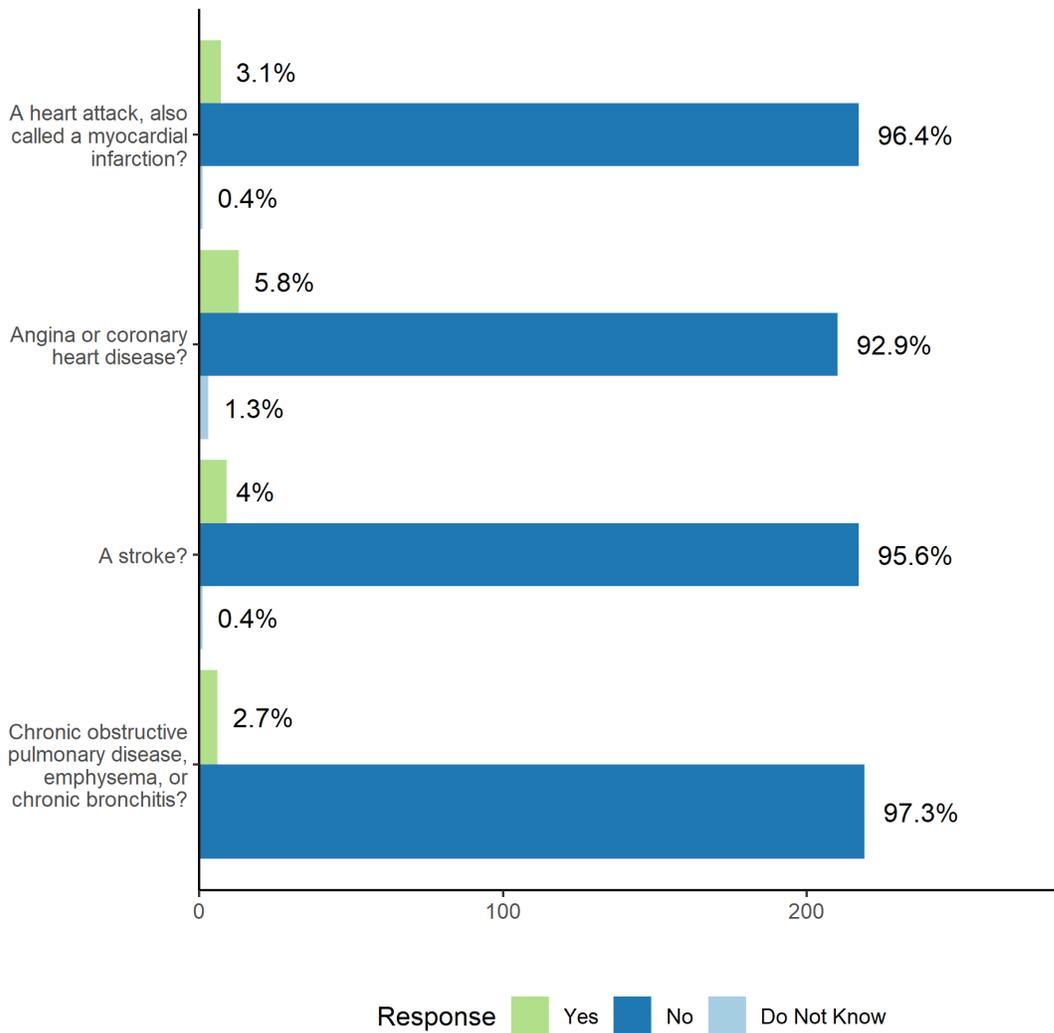
Question	Do Not Know	No	Yes	NA	Total
A heart attack, also called a myocardial infarction?	1	217	7	2	227
Angina or coronary heart disease?	3	210	13	1	227
A stroke?	1	217	9	0	227
Chronic obstructive pulmonary disease, emphysema, or chronic bronchitis?	0	219	6	2	227

Has a doctor, nurse, or other health professional EVER told you that your blood CHOLESTEROL is high?

Total Responses = 207
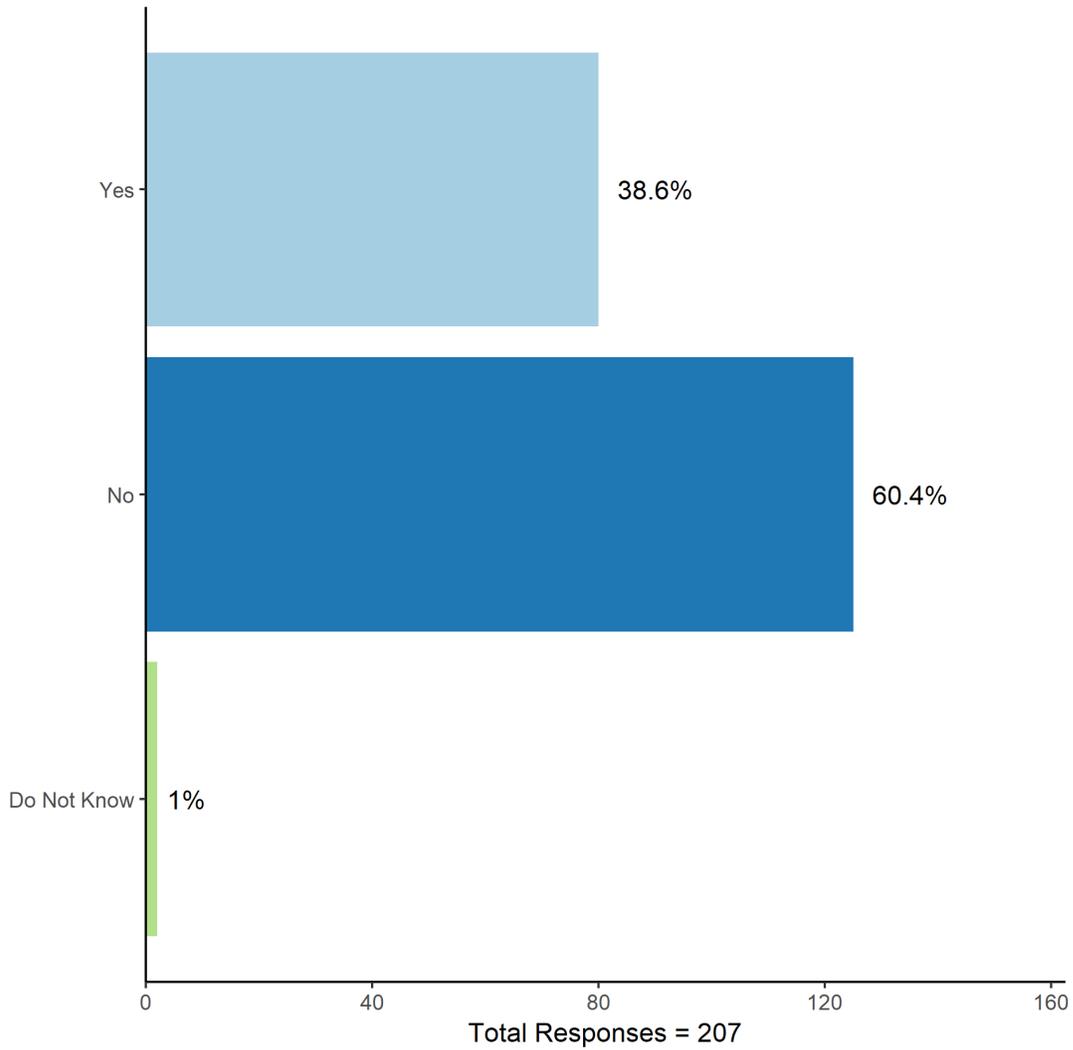
Response	Count	Percent
Yes	80	38.6%
No	125	60.4%
Do Not Know	2	1%
Total Responses	207	

Has a doctor, nurse, or other health professional EVER told you that you had HIGH blood PRESSURE?
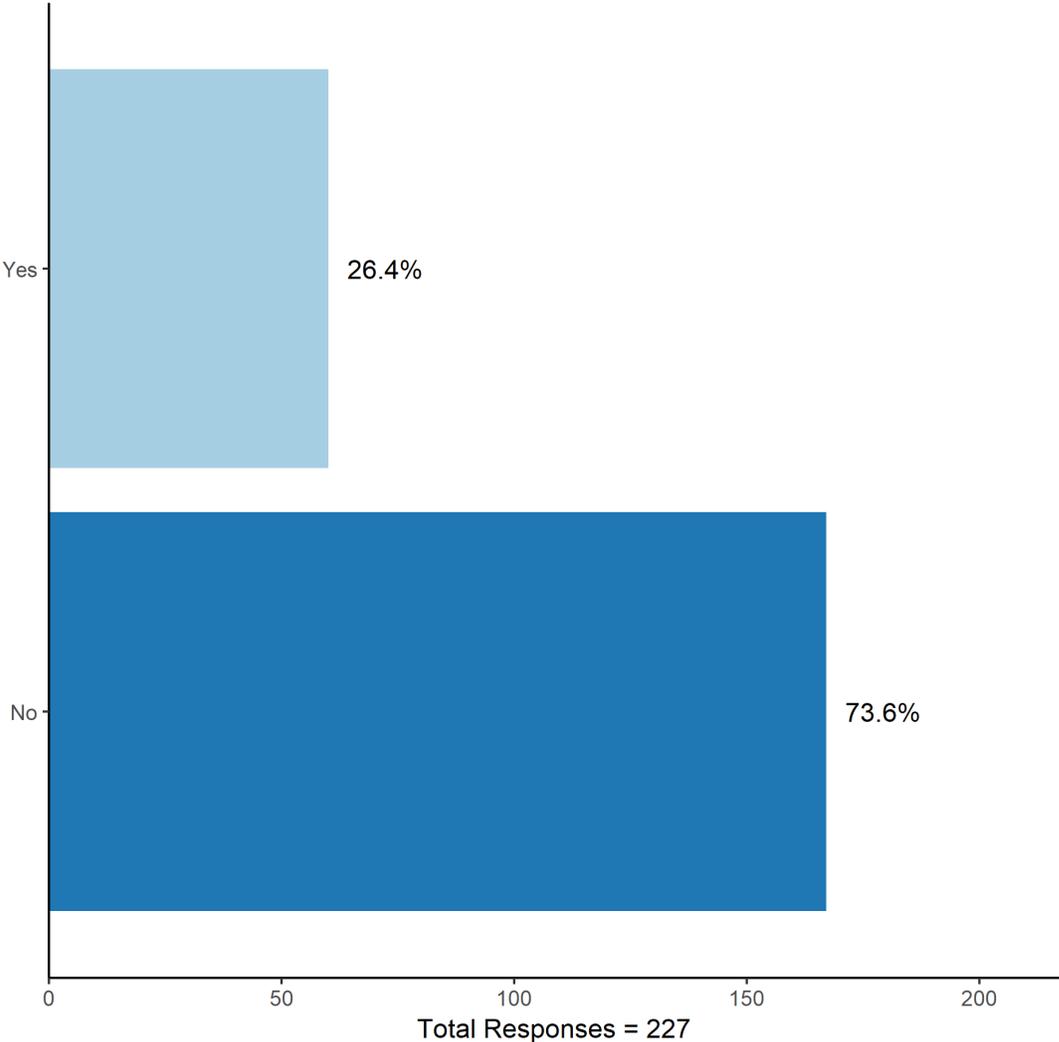
Response	Count	Percent
Yes	60	26.4%
No	167	73.6%
Total Responses	227	

How long has it been since you last visited a dentist or a dental clinic for any reason? Include visits to dental?

Total Responses = 227
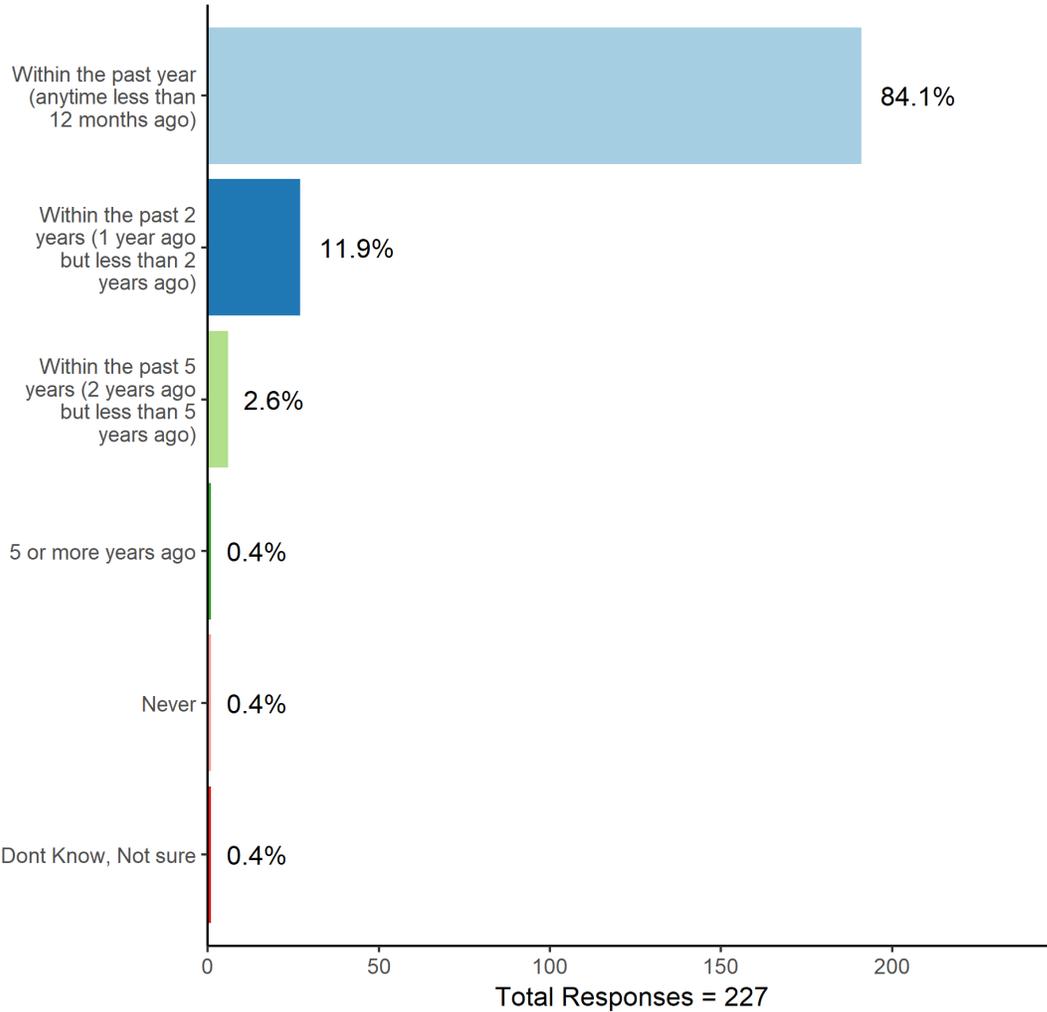
Response	Count	Percent
Within the past year (anytime less than 12 months ago)	191	84.1%
Within the past 2 years (1 year ago but less than 2 years ago)	27	11.9%
Within the past 5 years (2 years ago but less than 5 years ago)	6	2.6%
5 or more years ago	1	0.4%
Never	1	0.4%
Don't Know, Not sure	1	0.4%
Total Responses	227	

Has a doctor, nurse, or other health professional EVER told you that you had ASTHMA?

Total Responses = 227
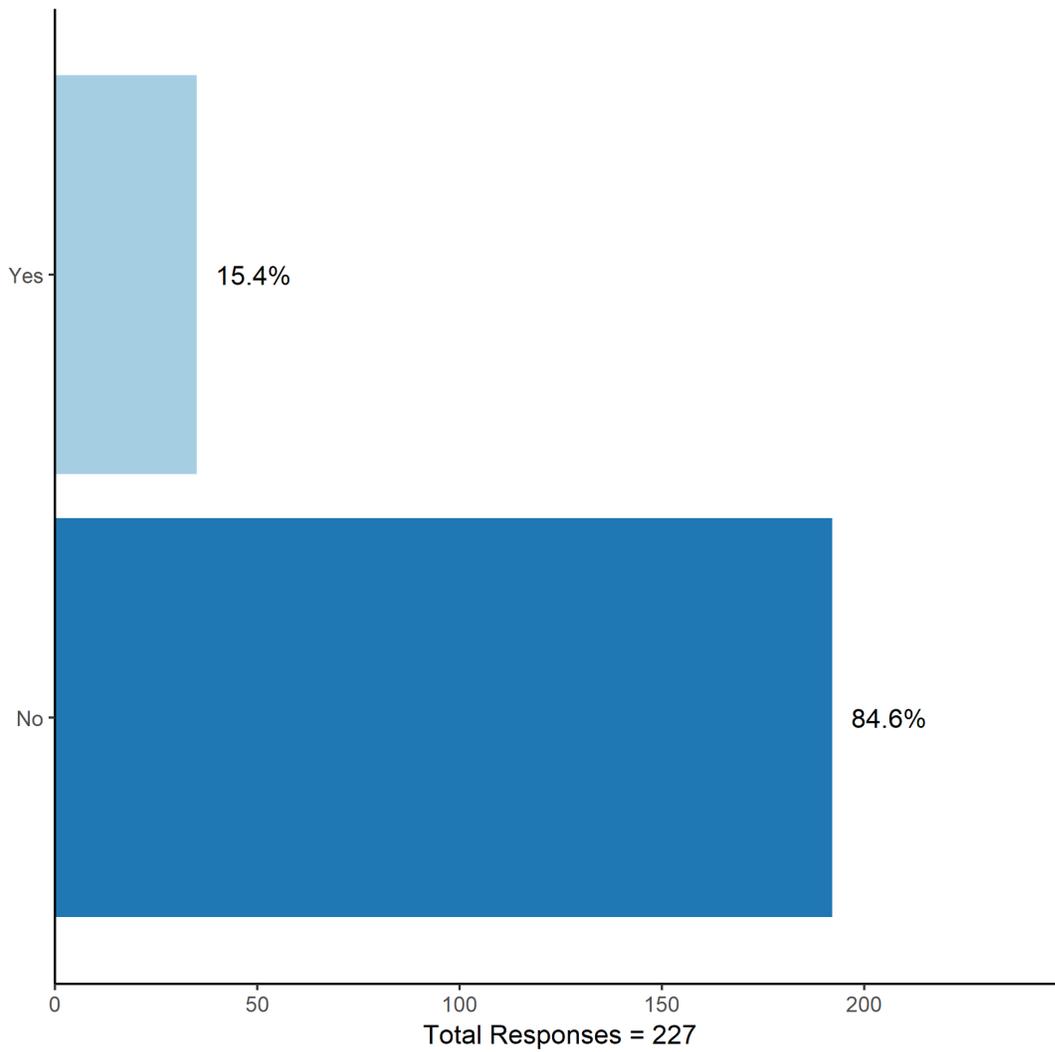
Response	Count	Percent
Yes	35	15.4%
No	192	84.6%
Total Responses	227	

Do you now smoke cigarettes every day, some days, or not at all?
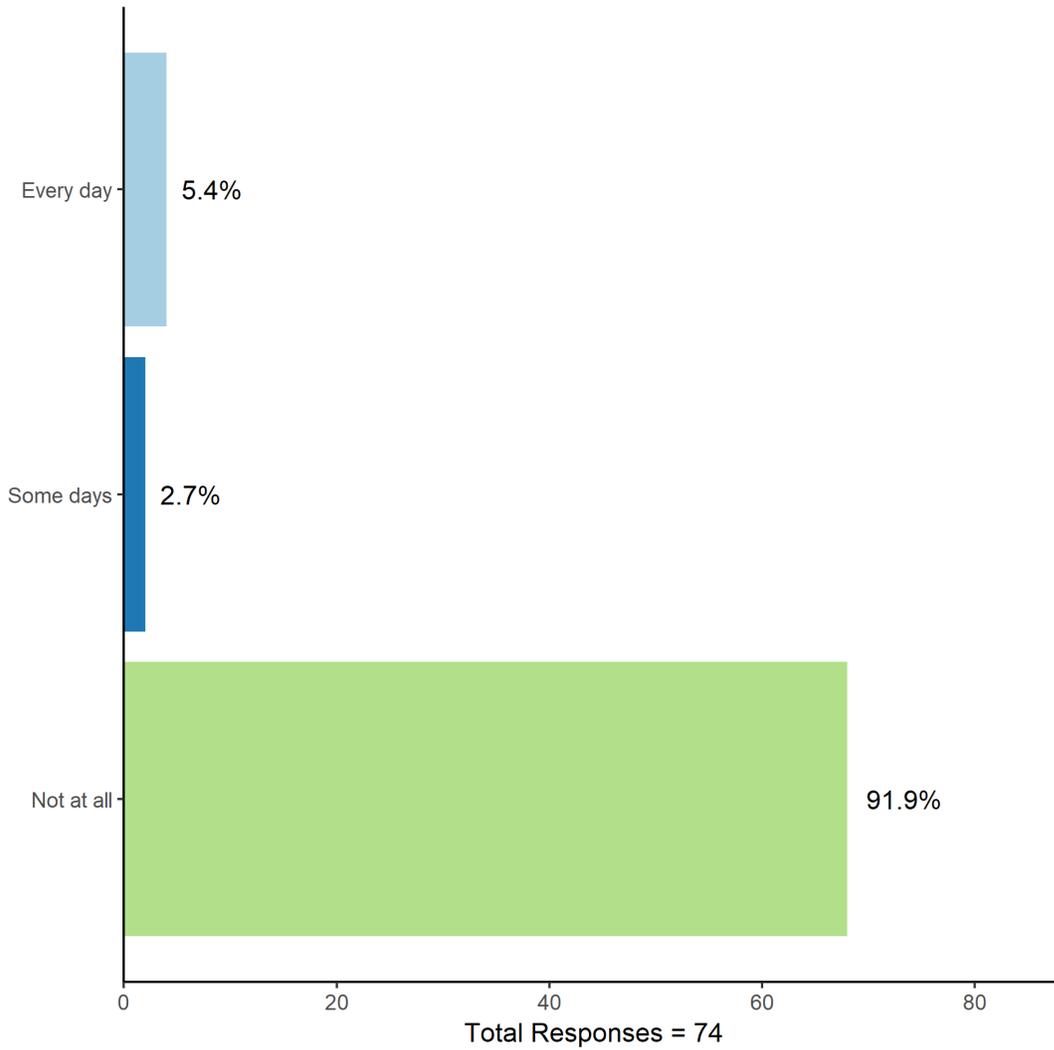
Total Responses = 74

Response	Count	Percent
Every day	4	5.4%
Some days	2	2.7%
Not at all	68	91.9%
Total Responses	74	

Do you currently use chewing tobacco, snuff, or snus every day, some days, or not at all?

Every day ┤ 0.4%

Not at all ┤ 99.6%

0   100   200

Total Responses = 227
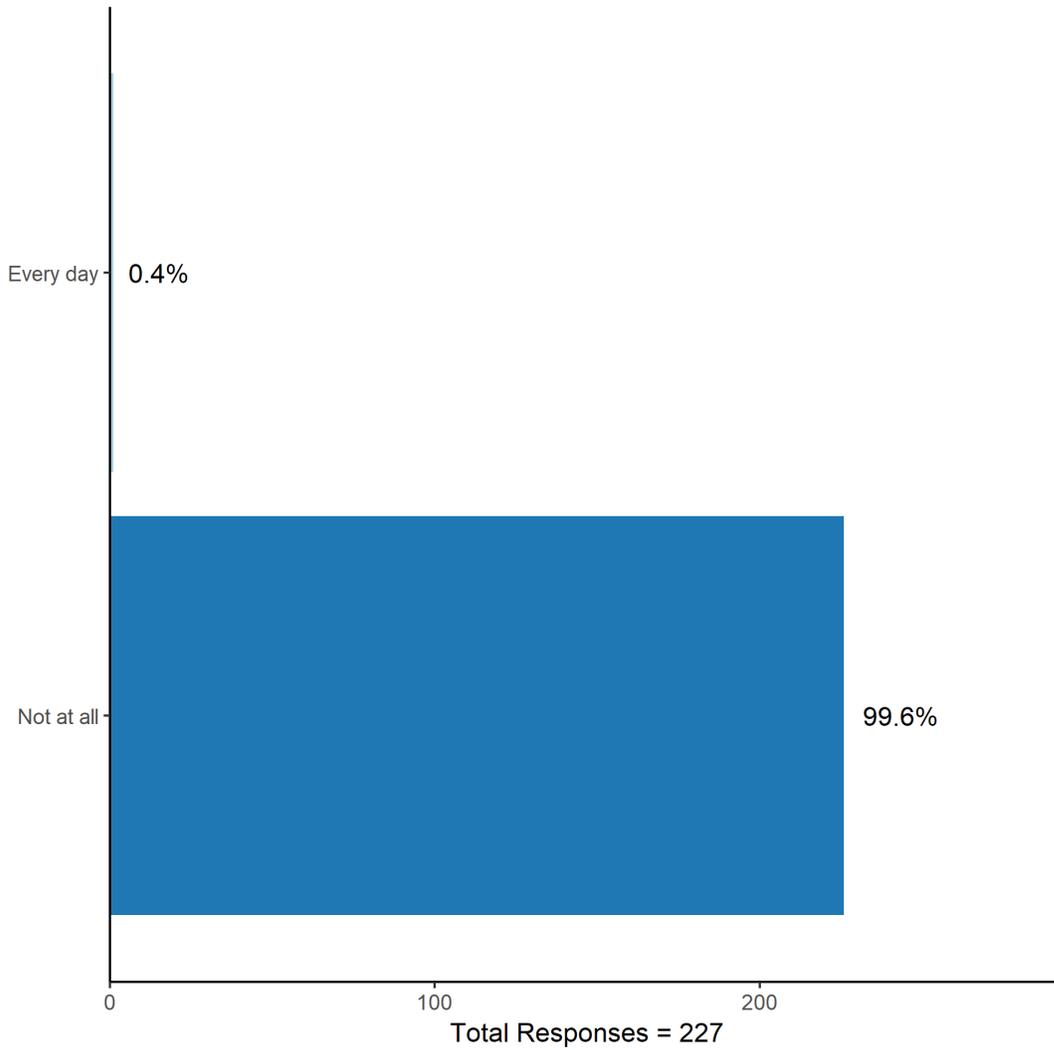
Response	Count	Percent
Every day	1	0.4%
Not at all	226	99.6%
Total Responses	227	

Electronic cigarettes, or e-cigarettes as they are often called, are battery-operated devices that simulate smoking a cigarette, but do not involve the burning of tobacco. The heated vapor produced by an e-cigarette often contains nicotine. Have you ever used an electronic cigarette, even just one time in your entire life?
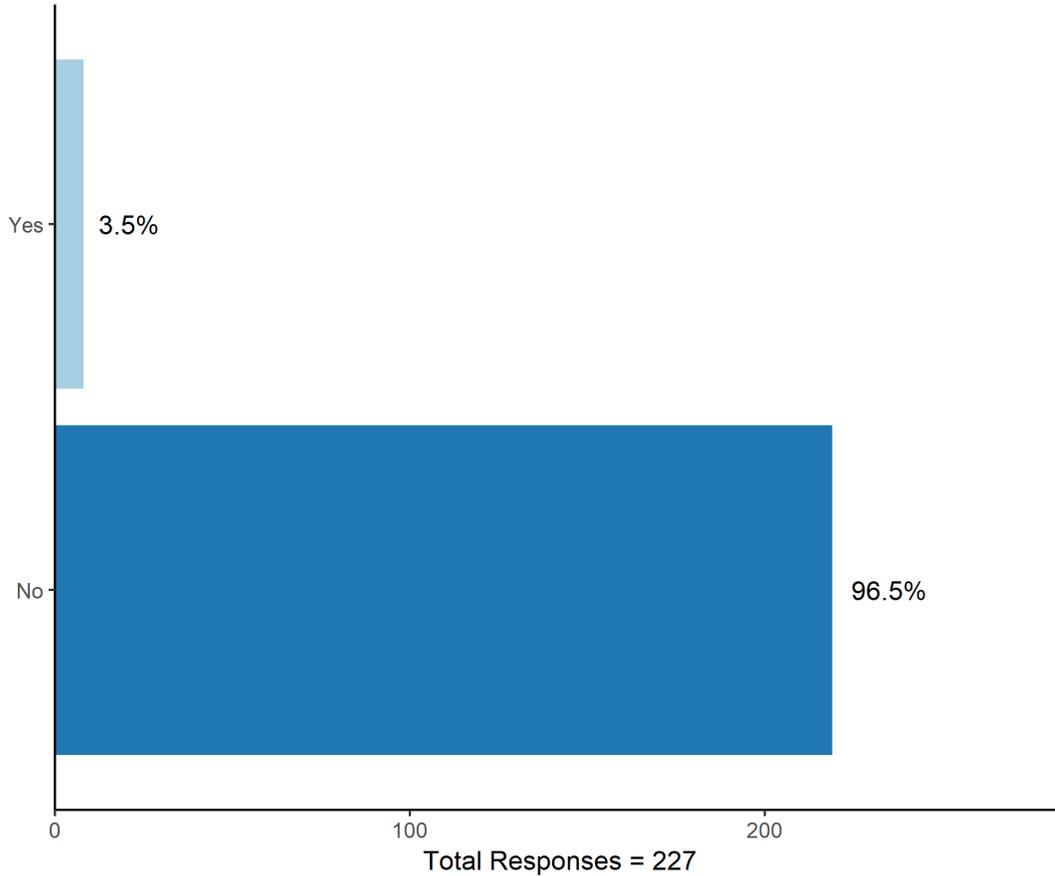
Response	Count	Percent
Yes	8	3.5%
No	219	96.5%
Total Responses	227	

203

Do you now use electronic cigarettes every day, some days, or not at all?
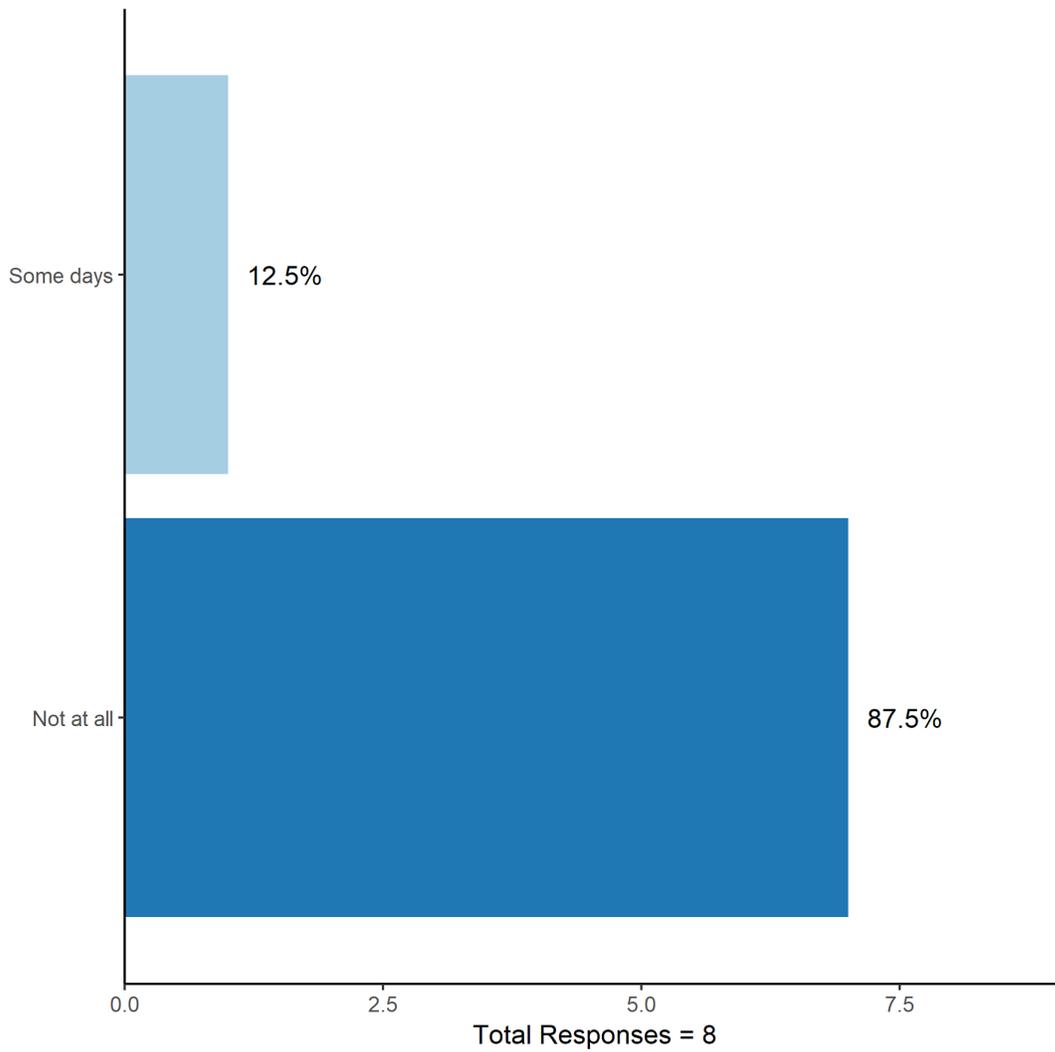
Total Responses = 8

Response	Count	Percent
Some days	1	12.5%
Not at all	7	87.5%
Total Responses	8	

During the past 30 days, how many DAYS per WEEK did you have at least one drink of any alcoholic beverage?
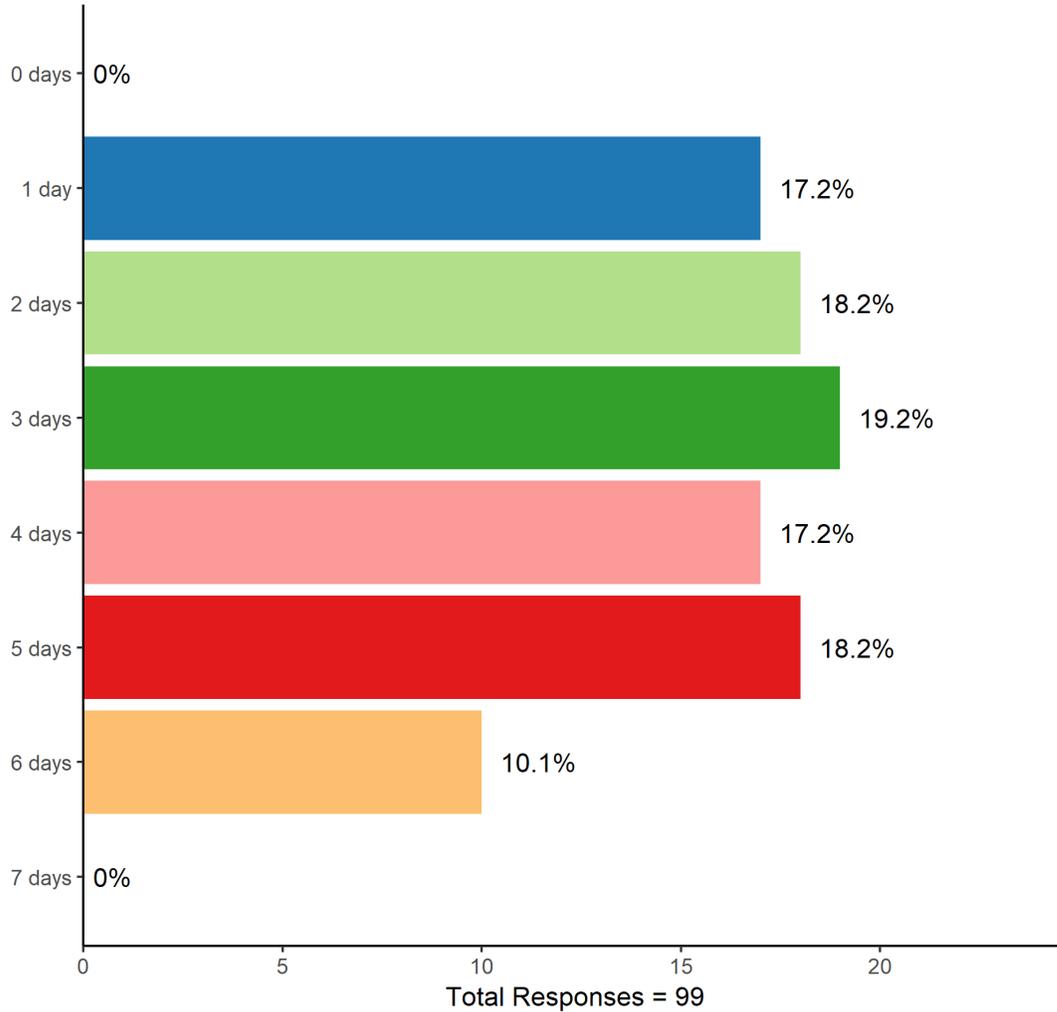
Total Responses = 99

Response	Count	Percent
0 days	0	0%
1 day	17	17.2%
2 days	18	18.2%
3 days	19	19.2%
4 days	17	17.2%
5 days	18	18.2%
6 days	10	10.1%
7 days	0	0%
Total Responses	99	

During the past 30 days, how many DAYS per MONTH did you have at least one drink of any alcoholic beverage?
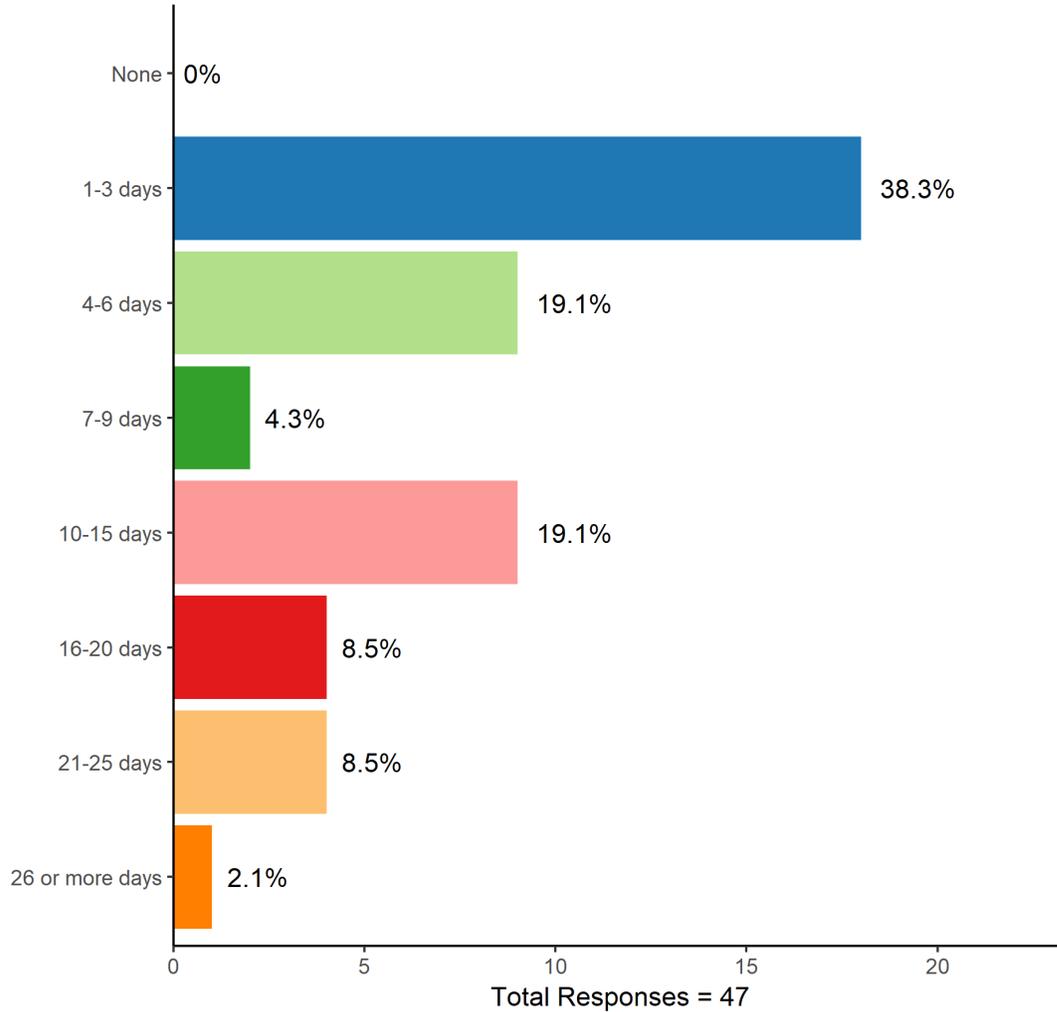
Response	Count	Percent
None	0	0%
1-3 days	18	38.3%
4-6 days	9	19.1%
7-9 days	2	4.3%
10-15 days	9	19.1%
16-20 days	4	8.5%
21-25 days	4	8.5%
26 or more days	1	2.1%
Total Responses	47	

Total Responses = 47

Considering all types of alcoholic beverages, how many times during the past 30 days did you have FIVE for men, FOUR for women or more drinks on an occasion?

Total Responses = 177
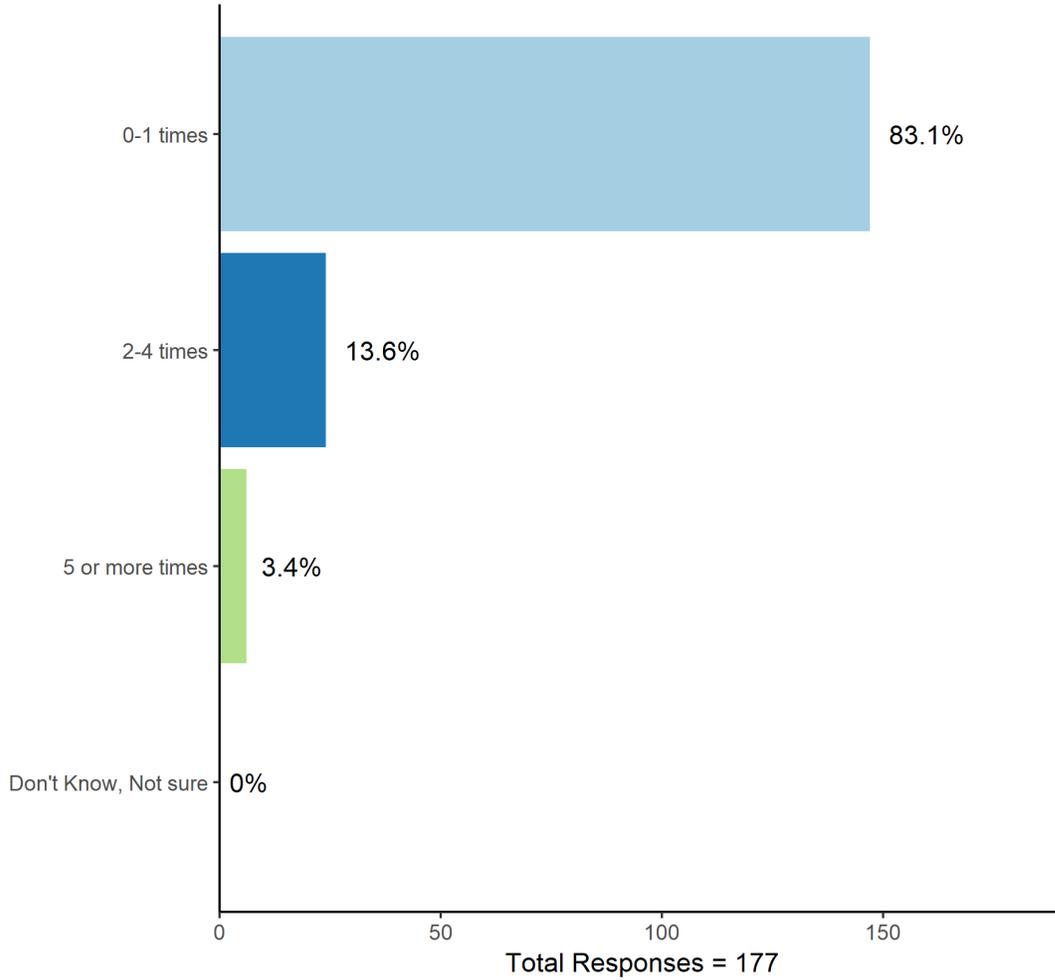
Response	Count	Percent
0-1 times	147	83.1%
2-4 times	24	13.6%
5 or more times	6	3.4%
Don't Know, Not sure	0	0%
Total Responses	177	

Have you ever, even once, used marijuana or hashish?

Total Responses = 227
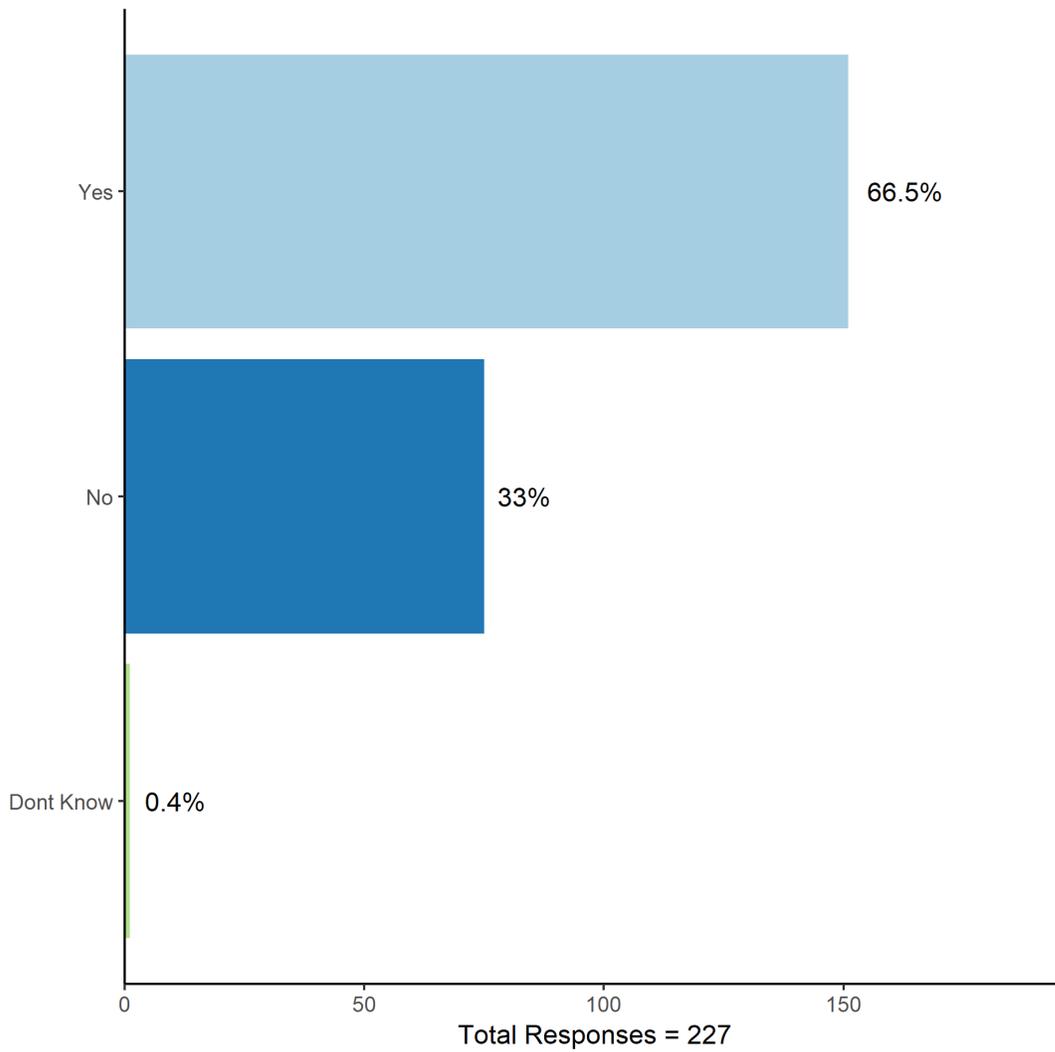
Response	Count	Percent
Yes	151	66.5%
No	75	33%
Don't Know	1	0.4%
Total Responses	227	

During the past 30 days, on how many occasions did you use marijuana or hashish?

Total Responses = 151
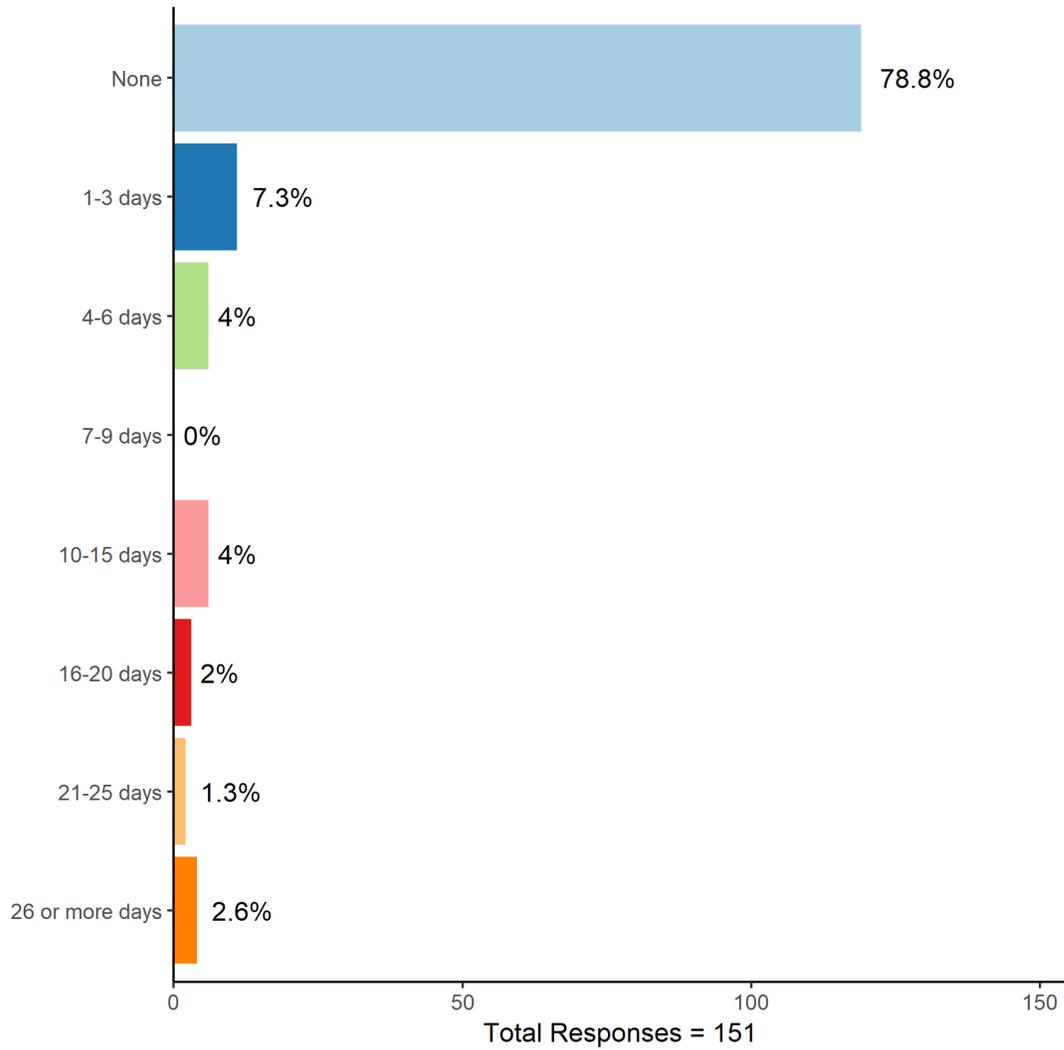
Response	Count	Percent
None	119	78.8%
1-3 days	11	7.3%
4-6 days	6	4%
7-9 days	0	0%
10-15 days	6	4%
16-20 days	3	2%
21-25 days	2	1.3%
26 or more days	4	2.6%
Total Responses	151	

Now I will ask you questions about seasonal flu.
A flu shot is an influenza vaccine injected into
your arm. During the past 12 months, have you had
a seasonal flu shot?

Total Responses = 227
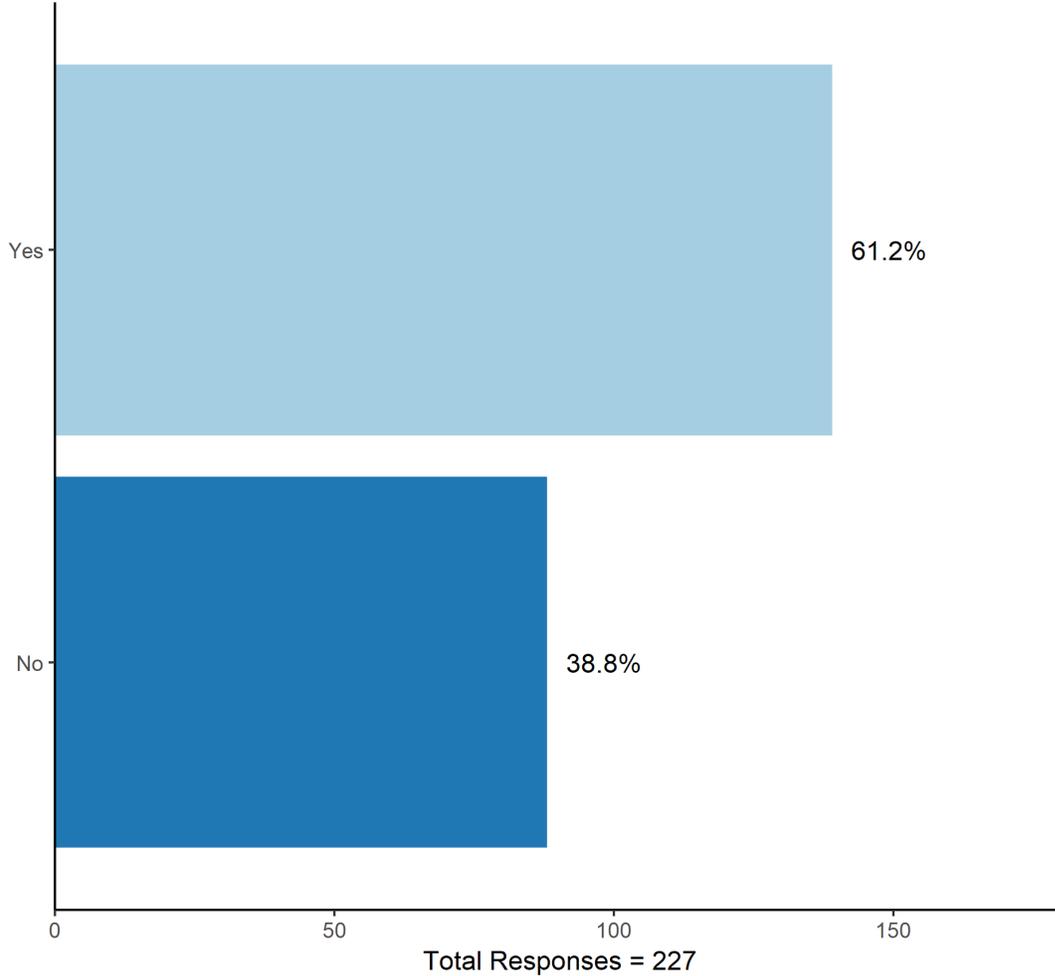
Response	Count	Percent
Yes	139	61.2%
No	88	38.8%
Total Responses	227	

Ever had a Pap test

Total Responses = 144
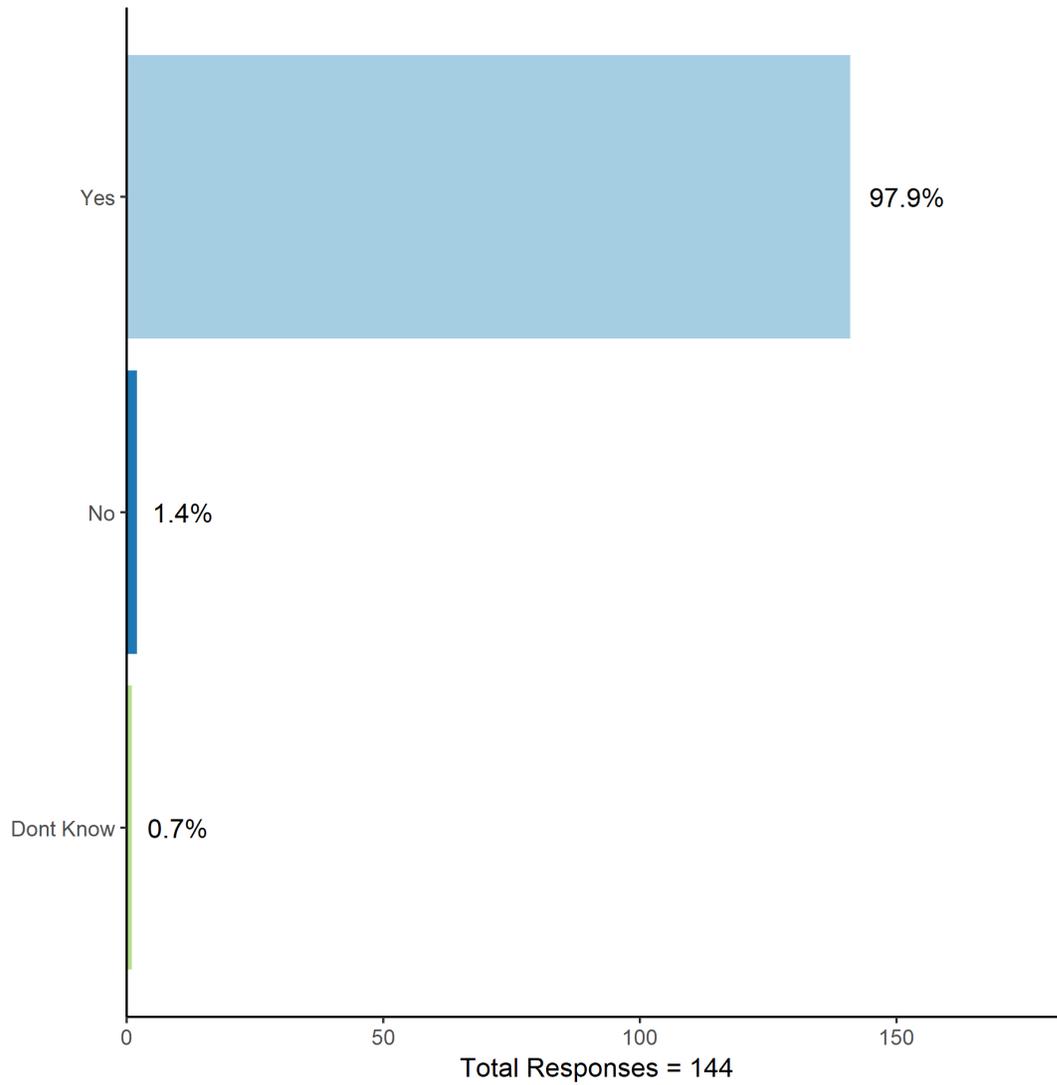
Response	Count	Percent
Yes	141	97.9%
No	2	1.4%
Don't Know	1	0.7%
Total Responses	144	

Sigmoidoscopy and colonoscopy are exams in which
a tube is inserted in the rectum to view the colon
for signs of cancer or other health problems. Have
you ever had either of these exams?

Total Responses = 159
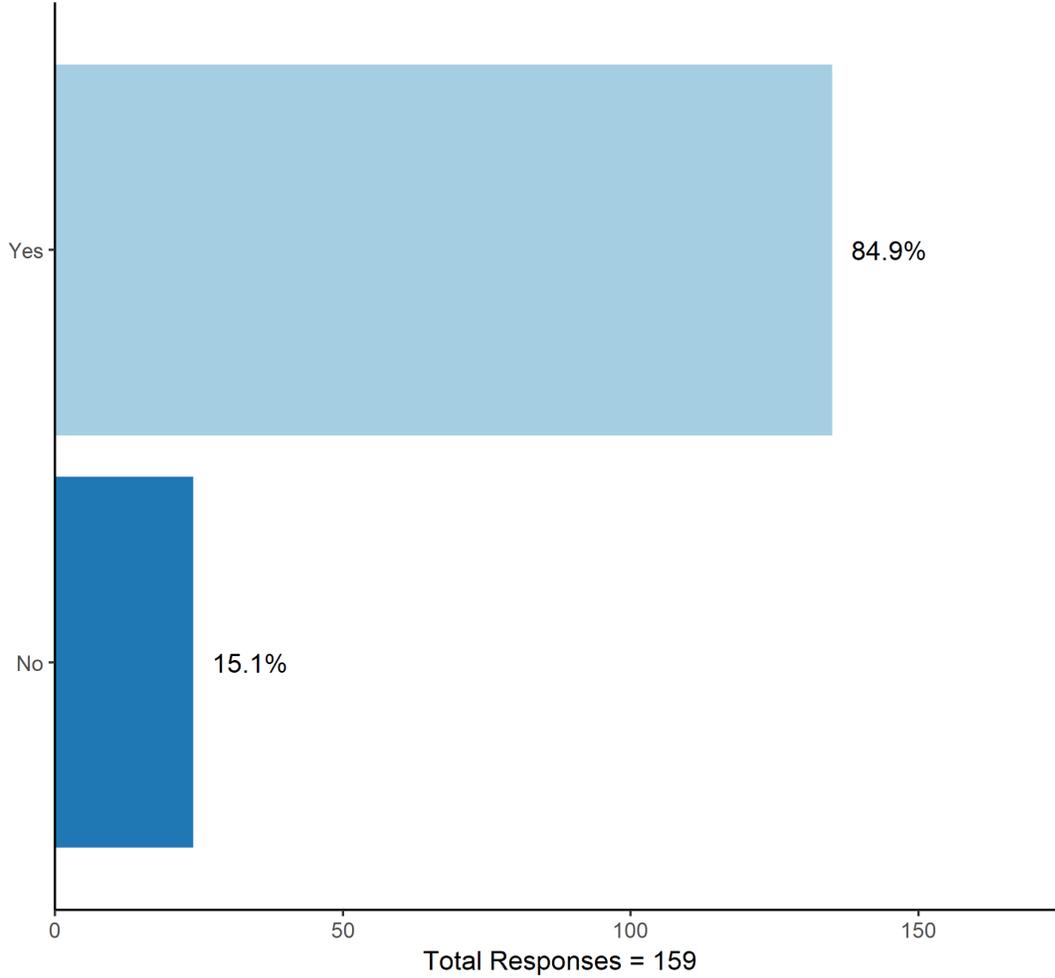
Response	Count	Percent
Yes	135	84.9%
No	24	15.1%
Total Responses	159	

Have you EVER been told by a doctor, nurse, or other health professional that you had CANCER?

Total Responses = 226
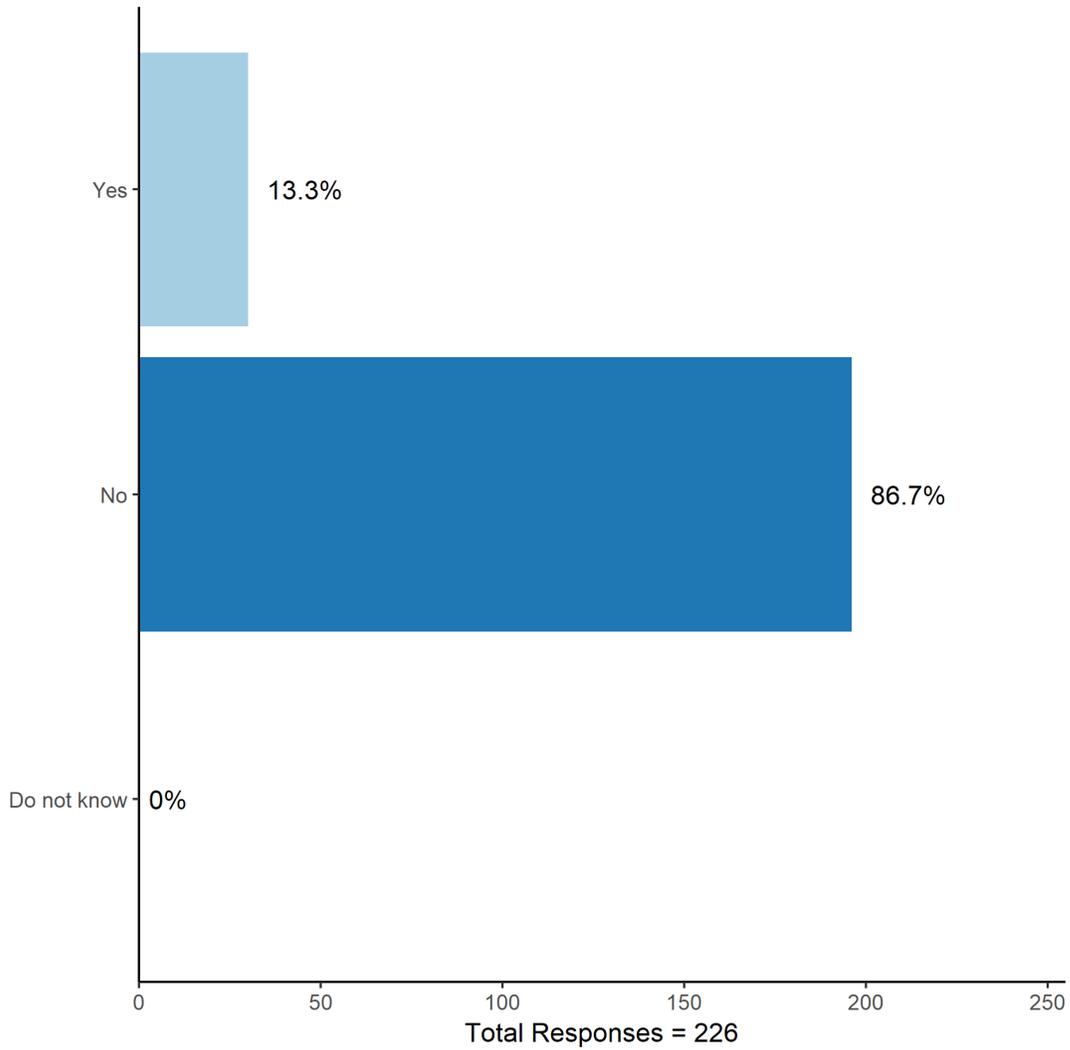
Response	Count	Percent
Yes	30	13.3%
No	196	86.7%
Do not know	0	0%
Total Responses	226	

Over the last 2 weeks, how many days have you:

Response

- 13-14 days
- 10-12 days
- 7-9 days
- 4-6 days
- 1-3 days
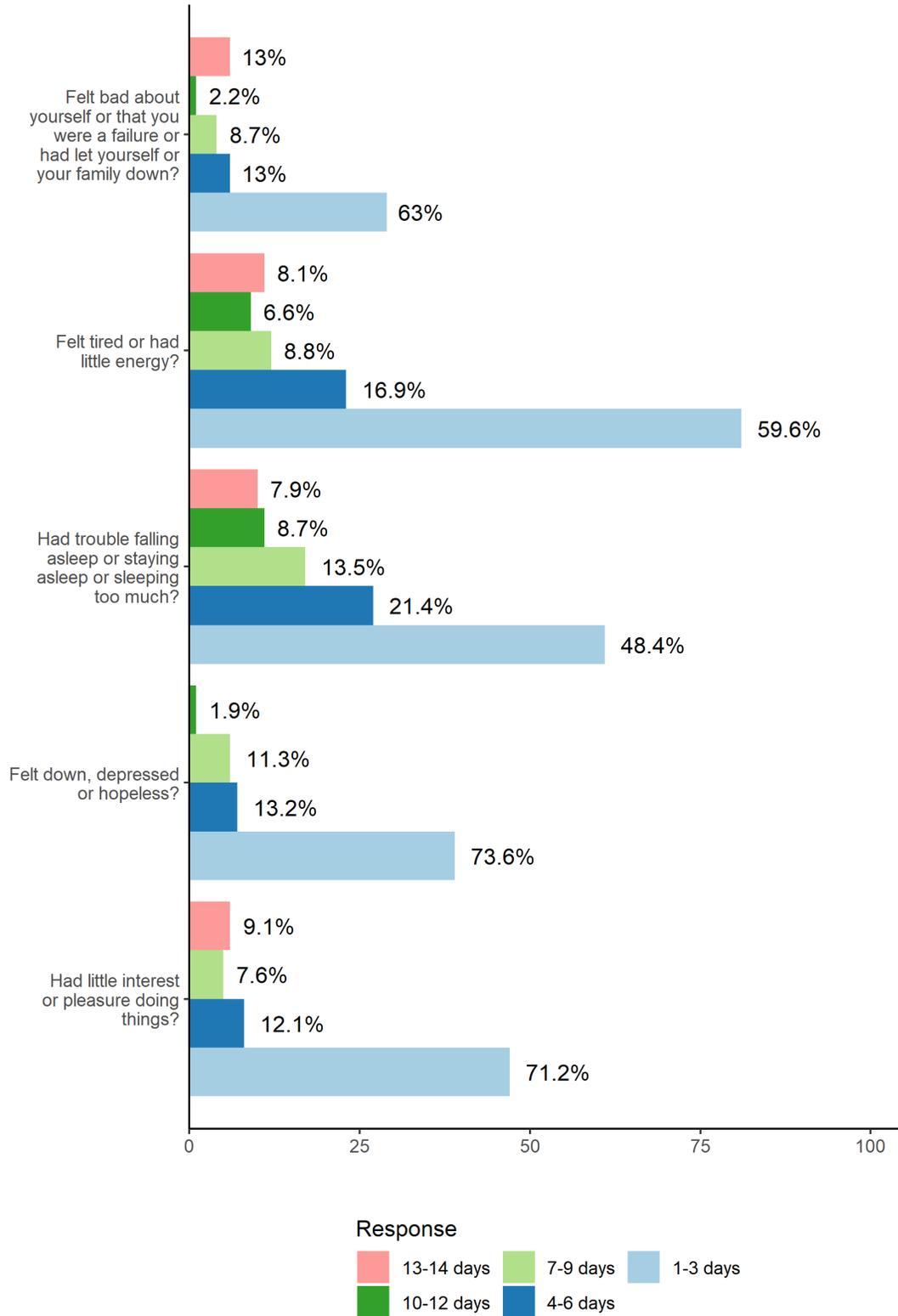
Question	1-3 days	10-12 days	13-14 days	4-6 days	7-9 days	NA	Total
Had little interest or pleasure doing things?	47	0	6	8	5	161	227
Felt down, depressed or hopeless?	39	1	0	7	6	174	227
Had trouble falling asleep or staying asleep or sleeping too much?	61	11	10	27	17	101	227
Felt tired or had little energy?	81	9	11	23	12	91	227
Felt bad about yourself or that you were a failure or had let yourself or your family down?	29	1	6	6	4	181	227

Question 32 (TFHS: M17_9)

Has a doctor or other healthcare provider EVER told you that you have an ANXIETY disorder (including acute stress disorder, anxiety, generalized anxiety disorder, OCD, panic disorder, phobia, PTSD, or social anxiety disorder)?

Total Responses = 227
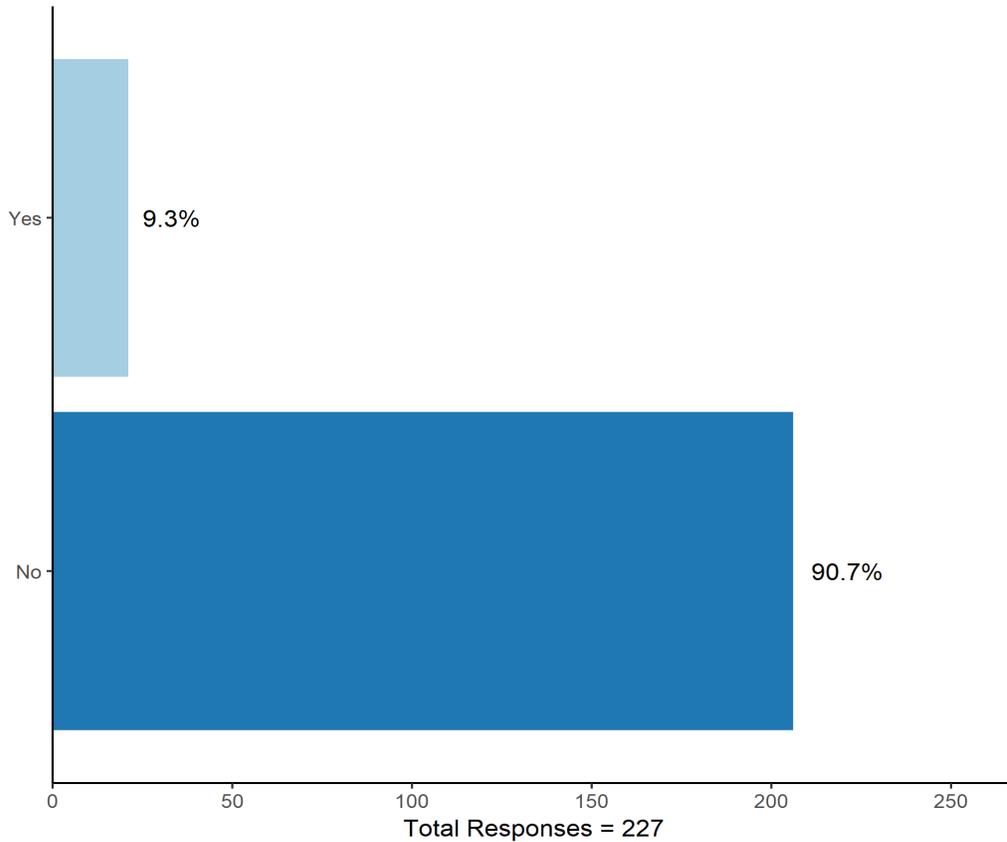
Response	Count	Percent
Yes	21	9.3%
No	206	90.7%
Total Responses	227	

Has a doctor or other healthcare provider EVER
told you that you have a DEPRESSIVE disorder
(including depression, major depression,
dysthymia, or minor depression)?

Yes — 12.4%

No — 87.6%

Total Responses = 226
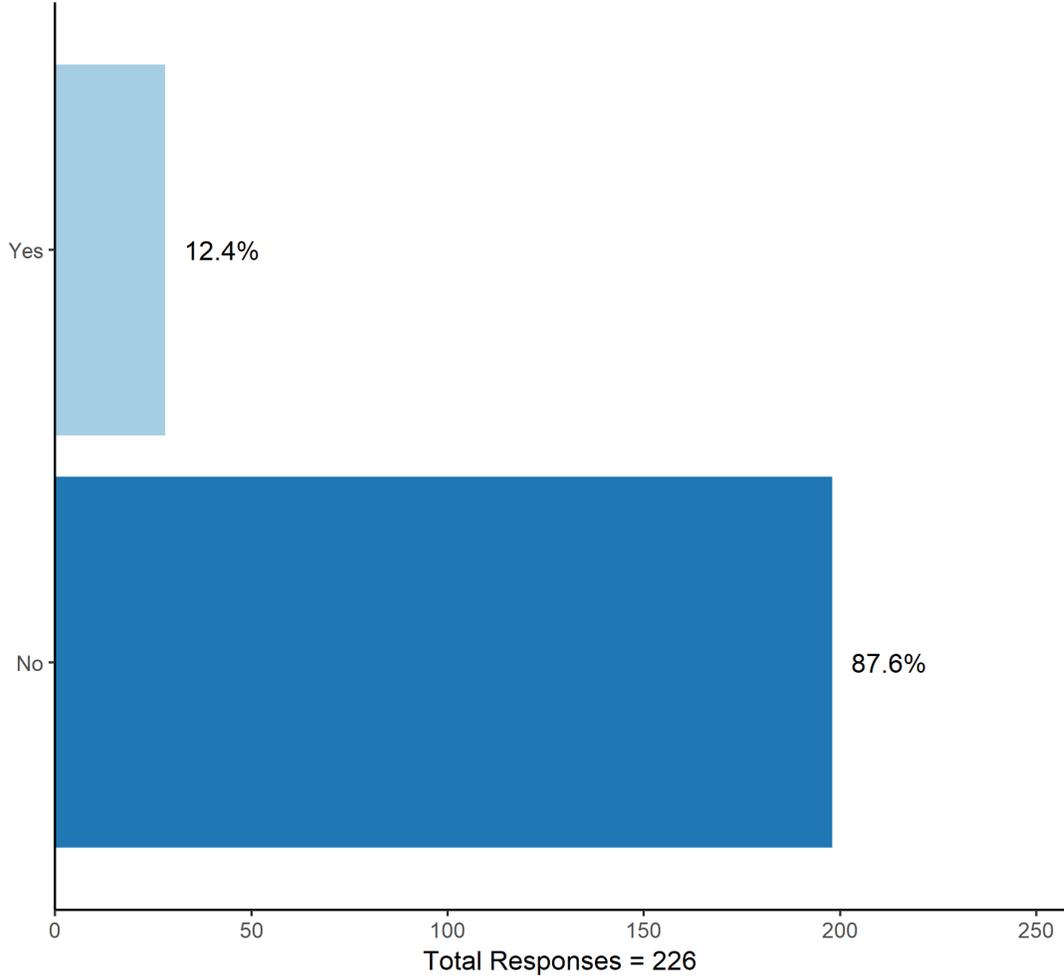
Response	Count	Percent
Yes	28	12.4%
No	198	87.6%
Total Responses	226	

During the past 12 months, have you received any treatment or counseling for any problem you were having with your emotions, nerves or mental health?Please do NOT include treatment for alcohol or drug use.
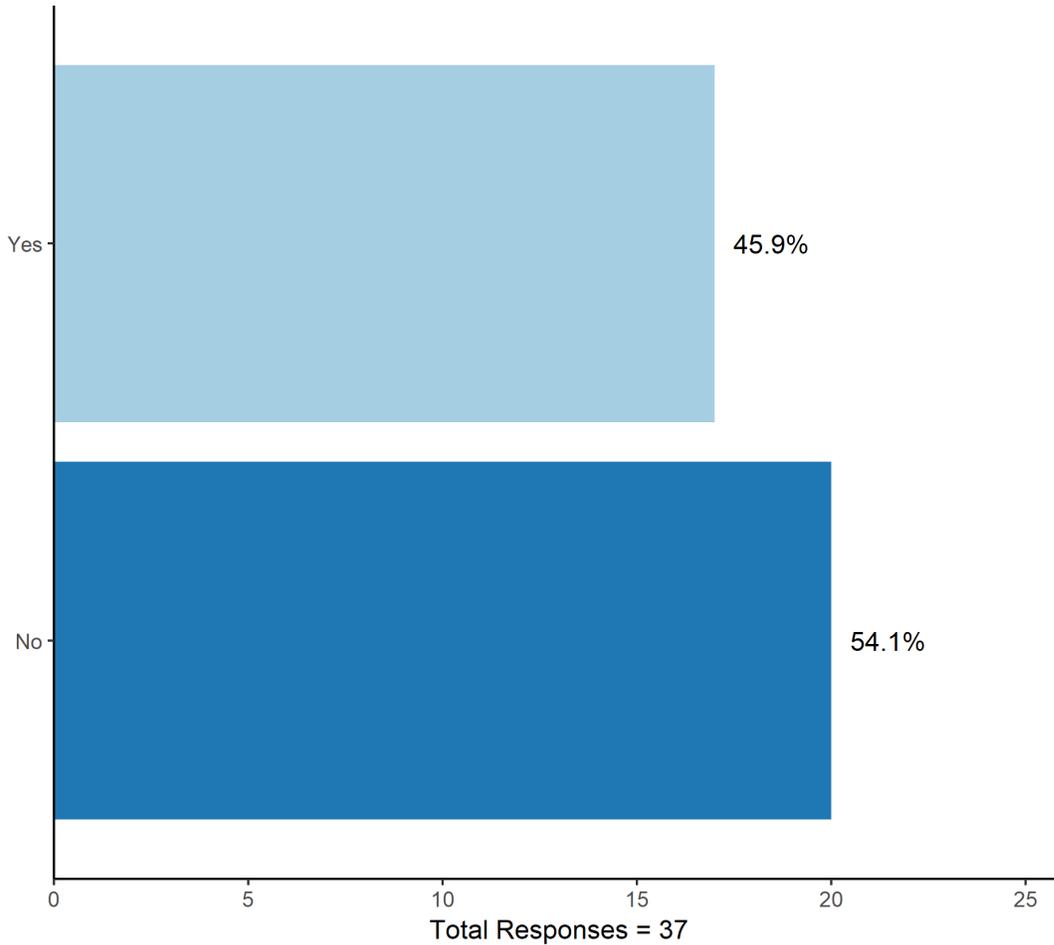
Total Responses = 37

Response	Count	Percent
Yes	17	45.9%
No	20	54.1%
Total Responses	37	

Not counting carrots, potatoes, or salad, how many
SERVINGS of VEGETABLES did you eat during the PAST
WEEK? (Example: A serving of vegetables at both
lunch and dinner would be two servings.)

Total Responses = 223
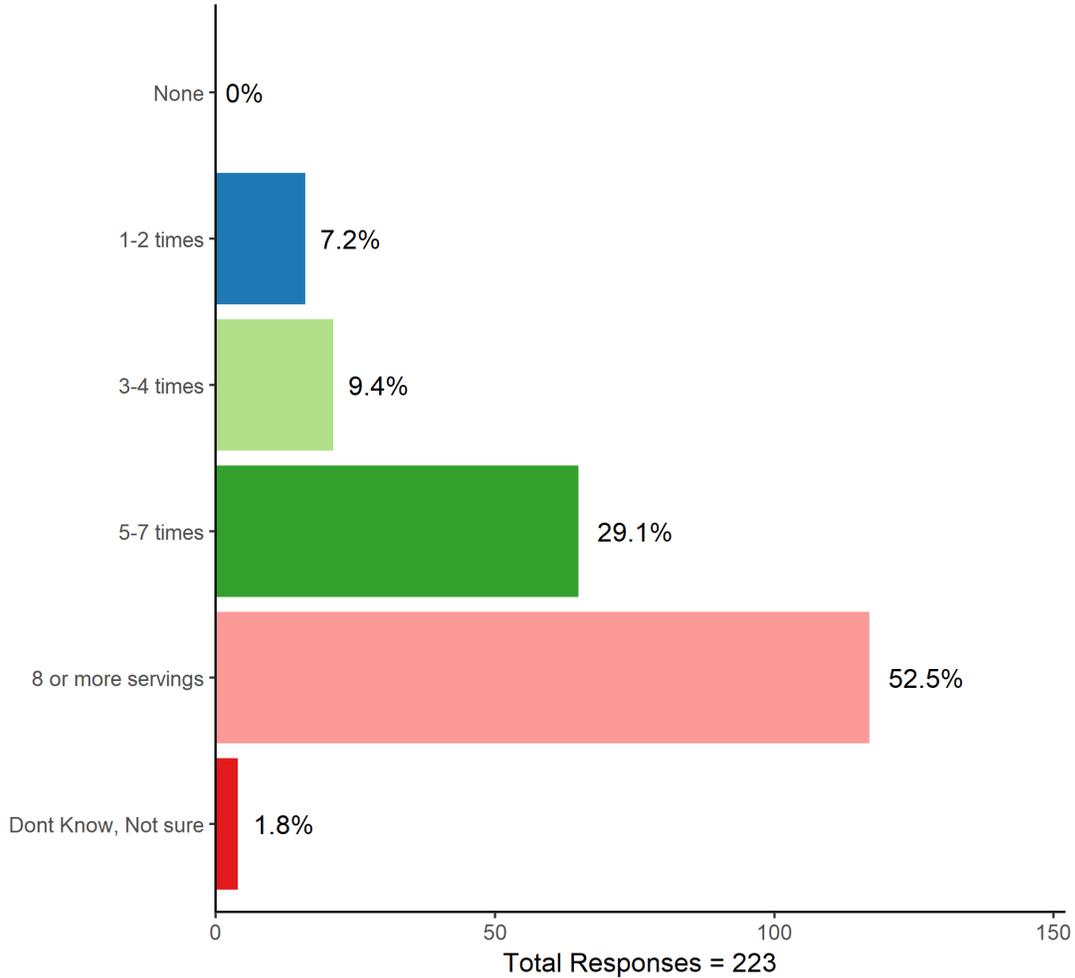
Response	Count	Percent
None	0	0%
1-2 times	16	7.2%
3-4 times	21	9.4%
5-7 times	65	29.1%
8 or more servings	117	52.5%
Don't Know, Not sure	4	1.8%
Total Responses	223	

Question 36 (TFHS: NoVeg1@a-NoVeg1@c)

Do anyof the following keep you and your family from eating MORE vegetables?
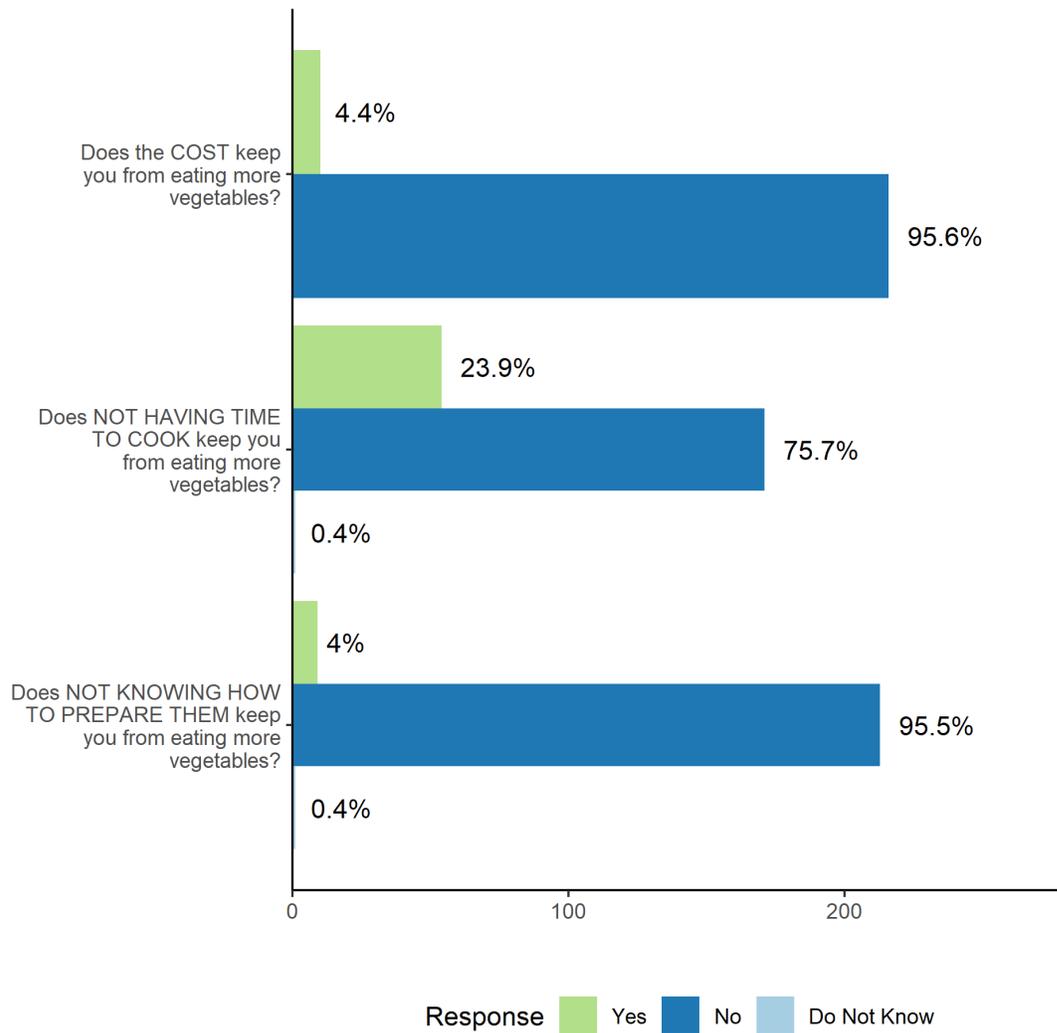
Question	Do Not Know	No	Yes	NA	Total
Does the COST keep you from eating more vegetables?	0	216	10	1	227
Does NOT HAVING TIME TO COOK keep you from eating more vegetables?	1	171	54	1	227
Does NOT KNOWING HOW TO PREPARE THEM keep you from eating more vegetables?	1	213	9	4	227

How many days in the past WEEK did you purchase or receive food from:

| Response | 5 or more days | 4 days | 3 days | 2 days | 1 day |

A Senior Center or Food Pantry?
- 28.6%
- 14.3%
- 57.1%

A Wal Mart, Target, KMart or other big box store?
- 4.5%
- 2.3%
- 4.5%
- 9.1%
- 79.5%

A convenience store or corner store?
- 8.3%
- 8.3%
- 8.3%
- 4.2%
- 70.8%

A Farmer's Market?
- 4.9%
- 3.7%
- 13.6%
- 77.8%

A grocery store such as Giant, Weis, Food Lion?
- 13.7%
- 7.3%
- 18%
- 27.8%
- 33.2%

A fast food or chain restaurant?
- 1.5%
- 1.5%
- 14.9%
- 20.9%
- 61.2%
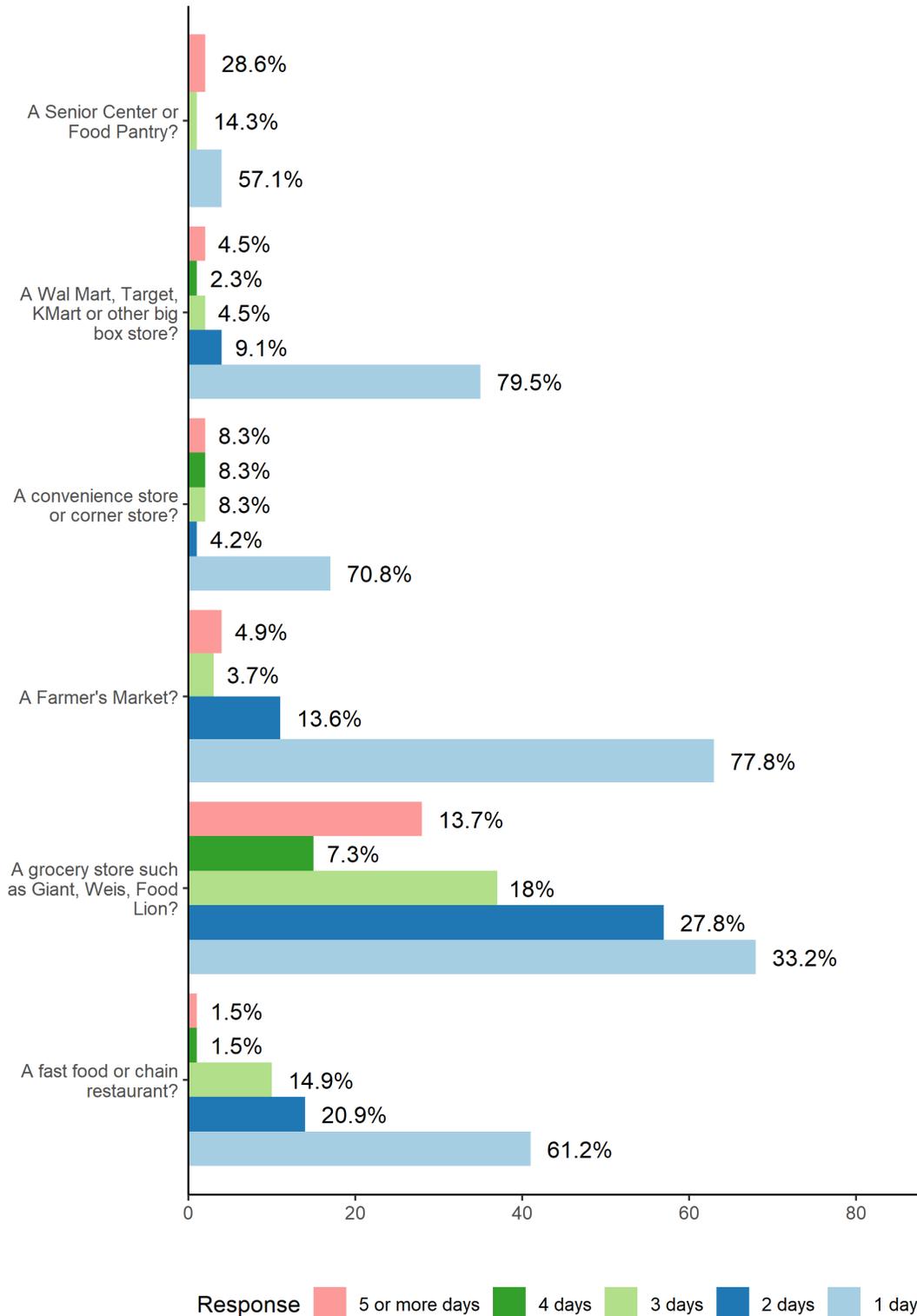
Question	1 day	2 days	3 days	4 days	5 or more days	NA	Total
A Senior Center or Food Pantry?	4	0	1	0	2	220	227
A Wal Mart, Target, Kmart or other big box store?	35	4	2	1	2	183	227
A convenience store or corner store?	17	1	2	2	2	203	227
A Farmer's Market?	63	11	3	0	4	146	227
A grocery store such as Giant, Weis, Food Lion?	68	57	37	15	28	22	227
A fast food or chain restaurant?	41	14	10	1	1	160	227

Question 38 (TFHS: CG1)

Some people play the role of caregiver as part of their daily lives, which means they are responsible for meeting the physical and psychological needs of others. Do you act as a caregiver for another ADULT, such as a spouse, sibling, aunt, uncle, parent, or grandparent?

Yes 10.6%

No 89%

Dont Know 0.4%

Total Responses = 227
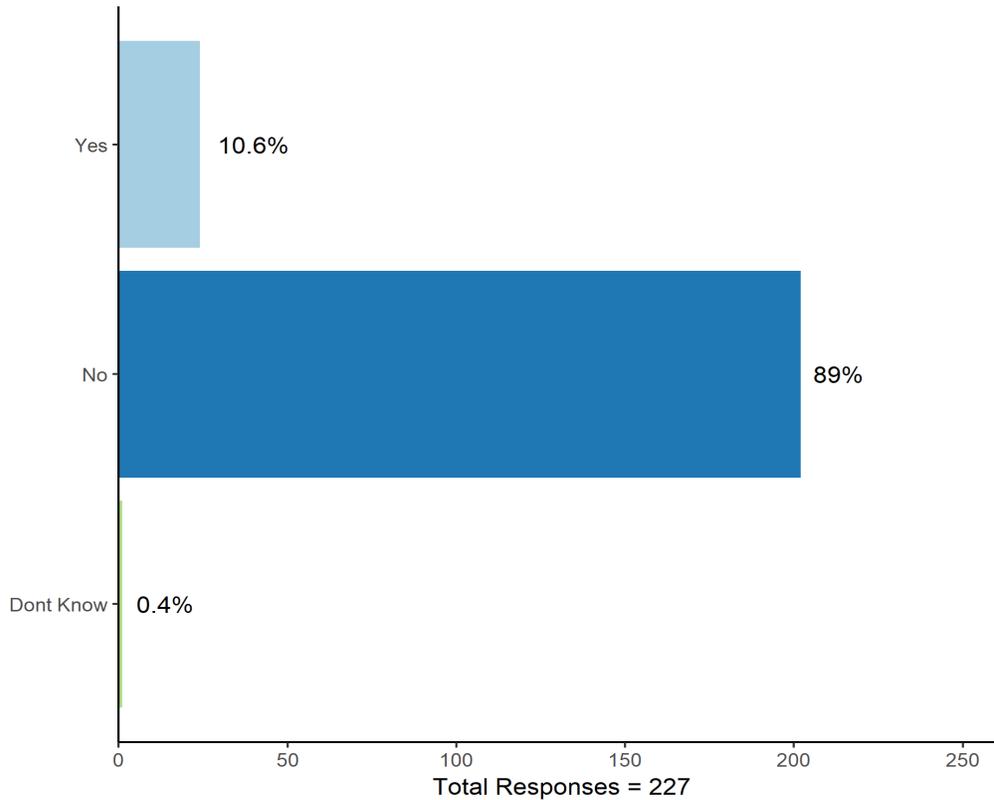
Response	Count	Percent
Yes	24	10.6%
No	202	89%
Don't Know	1	0.4%
Total Responses	227	

Question 39 (TFHS: EL2a-EL2d)

Do you have any of the following legal documents that are used in end-of-life situations? Do you have:
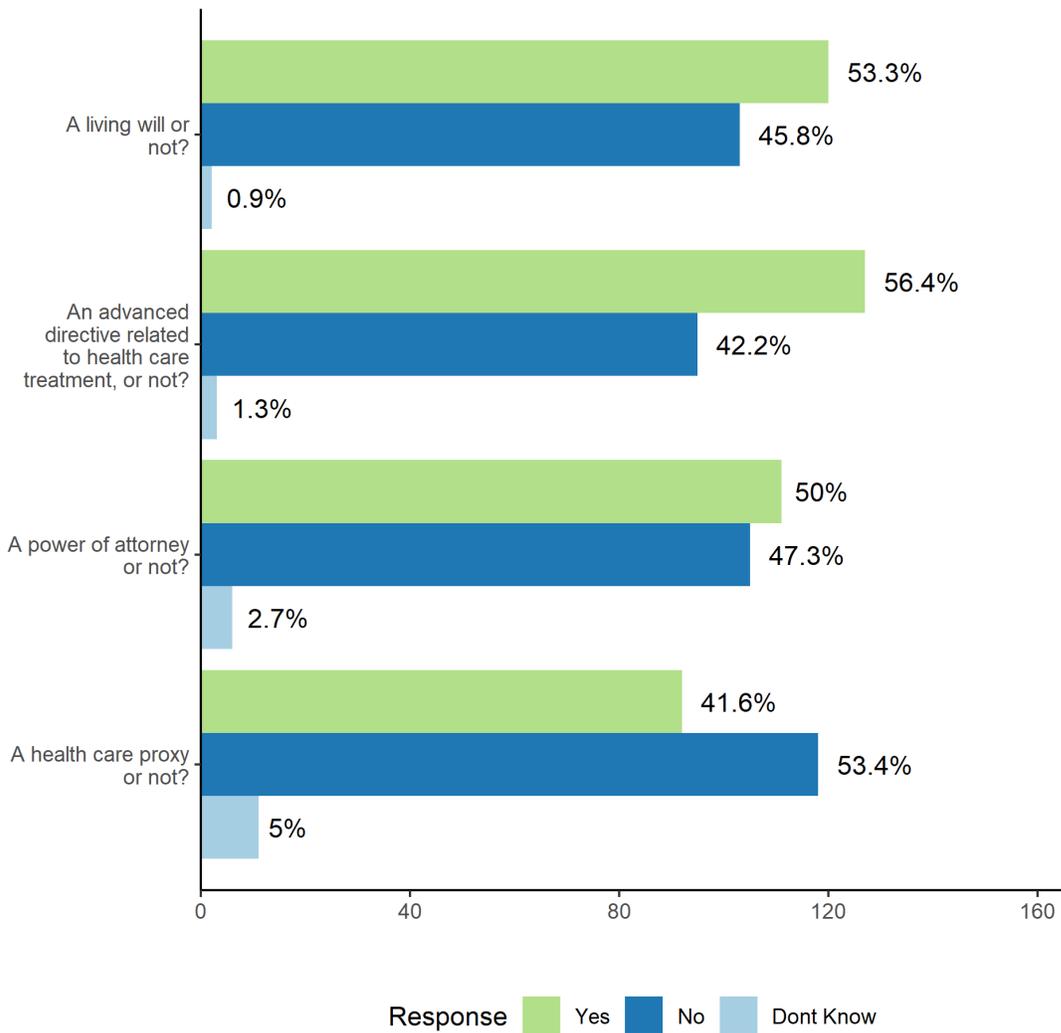
Question	Don't Know	No	Yes	NA	Total
A living will or not?	2	103	120	2	227
An advanced directive related to healthcare treatment, or not?	3	95	127	2	227
A power of attorney or not?	6	105	111	5	227
A healthcare proxy or not?	11	118	92	6	227

Have any language, cultural barriers, or your immigration status kept you from seeking medical care in the past year?

Total Responses = 227
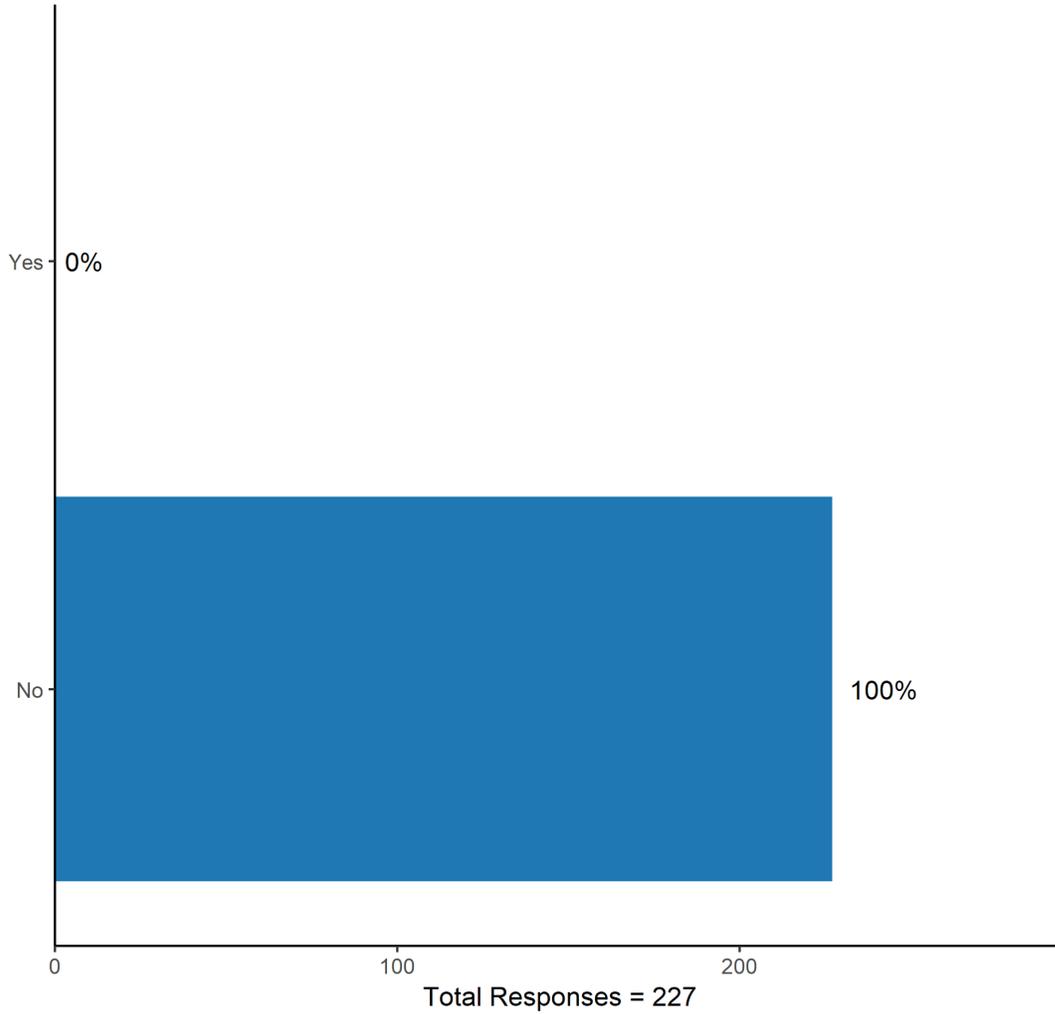
Response	Count	Percent
Yes	0	0%
No	227	100%
Total Responses	227	

REVISIONS

Date of Change	Person Making Change	Page Number	Content
5/30/23	Shannon Harney	223	Added the 2022 CHA Addendum updating key data points from the CDPH Core Module and including community COVID data.

2022 Nevada County Community Health Assessment Addendum

Nevada County Public Health Department
500 Crown Point Cir, Grass Valley, CA 95945

March 2023

Table of Contents

Executive Summary

Since the release of the Nevada County 2019 Community Health Needs Assessment (CHNA)/Community Health Assessment (CHA) of Nevada County report, communities have faced a global pandemic that has impacted nearly every aspect of physical, mental, emotional, social, and financial wellbeing. This addendum to the 2019 CHNA/CHA uses the latest data to report on the overall state of health, highlight important social determinants of health (SDOH), and describe the impact of COVID-19 on Nevada County communities.

Overall State of Health Trends

In Nevada County all-cause mortality increased and life expectancy declined between 2019 and 2020. Due primarily to the COVID-19 pandemic, life expectancy decreased by 1.1 years, from 81.3 to 80.2 years. Despite this, life expectancy in the county remains higher than the national average and equal to the average for California. Black and American Indians and Alaska Natives (AIAN) residents had the highest rate of age-adjusted mortality in 2020, and consistently over a nearly 10-year period, all-cause mortality rates have increased for AIAN. The leading causes of death in 2020 and 2021 were primarily chronic disease related, with COVID-19 reported as the fourth leading cause in 2020 and fifth in 2021.

Drug- and alcohol-related overdoses have seen a steady rise in Nevada County over the past 10-years. In 2020, drug overdoses were the third leading cause of death and leading contributor to years of life lost. In Nevada County, between 2019 and 2020, alcohol-related deaths increased 155% and drug overdose deaths increased 141%. Overdose deaths were highest among adults between 25-34 years of age and males who have a death rate three times higher than females within the county.

Social Determinants of Health and Place

Two social determinants, poverty and educational attainment, were measured by 'place' to compare with health outcomes, in this case mortality, within Nevada County. Following state trends, communities within Nevada County with high levels of poverty and low levels of education (higher percentage of the population with high school degree or less) had higher age-adjusted mortality.

COVID-19 in Nevada County

The first case of COVID-19 in Nevada County was reported March 16, 2020. Since the onset, Nevada County has had a total of 20,125 confirmed cases and 133 deaths (as of Feb 28th, 2023). Like many communities, COVID-19 variants resulted in three distinct surges that led to increasing positive case rates and hospitalizations within the county. Nevada County saw the highest confirmed cases in January 2022, primarily fueled by the Omicron variant, but saw the most COVID-19 hospitalizations in August 2021. About 61.1% of residents have received the primary series and a booster dose of the COVID-19 vaccine as of Feb 28th, 2023. Vaccination rates were highest among adults 65 years and older (79.4%), females (66%), and Whites (65.5%) and Asian American (63.8%). On the other hand, vaccination rates were lowest among children under 11 years of age (11.3%) and Latino population (45.4%).

COVID-19 Experiences

NCPHD commissioned FM3 Research, an independent research firm, to conduct a survey of Nevada County residents to assess views of the impacts of the pandemic, perceptions of the newly available vaccines and willingness to take them, and reactions to themes for communications that might promote vaccine acceptance among Nevada County residents. The survey with the title *"Nevada County Resident Attitude Towards COVID-19 Vaccination"* was conducted from May 26th to June 3rd, 2021 amidst the height of the summer spike in cases. In this dual-mode resident survey, 611 adult residents of Nevada County participated. Survey methodology and responses are summarized in Appendix C.

Vaccine hesitancy varied by region, age, and race/ethnicity but remained low overall in the county at 7.3%. Those most hesitant included adults between 18-29 (21%), Latino residents (14%) and all residents of color (14%), Medi-Cal recipients (30%), and those that make an annual income between $30,000-$50,000 (14%). Among residents that were more resistant to vaccination, most were concerned about safety or how new the vaccine was. Overall**,** free vaccines, the safety record of vaccine trials, and appeals to personal responsibility were key motivators to vaccination. When surveyed about the impacts of COVID-19, 75% of respondents had or knew someone who had COVID-19, 48% had someone in the household that was especially vulnerable to COVID-19 complications, and 70% felt that the economic impacts of COVID-19 were a serious problem. Residents most likely to have reported having COVID-19 included Spanish speakers, uninsured people, men under 50 years of age, and those insured through Medi-Cal.

Introduction

In 2018, Sierra Nevada Memorial Hospital (SNMH) and Nevada County Public Health Department (NCPHD) worked collaboratively to produce the 2019 Community Health Needs Assessment (CHNA)/Community Health Assessment (CHA) of Nevada County [8]. The primary focus of the CHNA/CHA was to identify and prioritize significant health needs of Nevada County communities. The COVID-19 pandemic has exacerbated health disparities and long-standing health inequities in Nevada County. Low income and communities of color are less likely to have the option of working from home and to receive high-quality medical care, and more likely to have preexisting medical conditions that lead to worse outcomes from the novel coronavirus. COVID-19 burdened the health care system and has a significant impact on physical, mental, social, and economic wellbeing of residents of Nevada County. Because of the dynamic and evolving nature of health, needs change over time and new needs may appear as identified and demonstrated throughout the pandemic.

Purpose

This updated CHA is an addendum to the 2019 report and includes COVID-19 community health impact information and serves as a timely update. The CHA documents how the COVID-19 pandemic affected the county's communities. It goes beyond documenting the direct disease impacts of COVID-19 and focuses on the following five foundational community health topics.

1. Overall state of health of the community
2. Leading causes of death

3. Top public health conditions
4. Top ranking causes of hospitalization and emergency department (ED) visits
5. Social determinants of health (SDOH): Economic stability, education access and quality and environmental health

Methods

A population-based community health framework served as a guide for this addendum [1]. This framework recognizes the social determinants of health, where public health conditions, overall community health, and leading causes of death inform future health-related efforts and actions to address health disparities. Below are the steps that followed to complete this addendum.

1. Review existing 2019 CHNA/CHA for Nevada County
2. Identify foundational health topics and COVID-19-related impacts with a focus on health equity
3. Match health topics and needs with existing data from the 2022 State Health Assessment and secondary data sources
4. CHA addendum documenting health impact information and updates
5. Validate CHA addendum with review and consensus from multiple stakeholders

Data and Sources

Multiple types of data are essential for describing the state of health of the entire population. Most of the data included in this CHA addendum are from the 2022 Nevada County-specific version of the State Health Assessment (SHA) Core Module. The data obtained from the SHA Core Module included data on deaths, hospitalizations, reportable diseases, emergency department visits, years lived with disability, social determinants of health, and population denominators. Additional data sources that were used to tell the story of the health of Nevada County are referenced throughout and summarized in Appendix B.

Death Data

Most of the charts and tables in the SHA core module are based on death data. Death data are a high quality, geographically and demographically granular, and use a consistent data source. Death data allow for objective comparisons over time and between groups. Detailed data collection methods are included in the technical notes section located at the end of this document.

Data Time Frames

This 2022 COVID-19 addendum includes data through the most recent year for which complete data are available. For some charts, data for 2020 are shown while trend charts display data from 2000 through 2020. In some cases, for statistical stability or data de-identification purposes, years are aggregated into 3- or 5-year groups. It is important to present high-level data for the most recent time period available, especially during the COVID-19 pandemic. Therefore, data from January 2020 to February 2023 are included in the COVID-19 specific section of this report.

Limitations

Information presented in the CHA addendum are subject to some limitations. First, data are not available for all population subgroups. Population and demographic subgroup data for some of the indicators resulted in unreliable rates or there were too few cases to protect confidentiality. This is noted throughout the report with a symbol (*). Small population sizes could influence the values reflected in the charts. These values could be too high or too low and might not reflect the true value.

This will be noted throughout the report; this data should be interpreted with caution and are noted with a symbol (^).

Overall State of Health Trends in Nevada County

Overall Life Expectancy in Nevada County

Life expectancy at birth is a projection that estimates the average age of death for people born today given current death rates. It is how long, on average, a newborn can expect to live, if current death rates do not change. The COVID-19 pandemic has affected life expectancy locally and nationwide. The decline in life expectancy between 2019 and 2020 is primarily due to deaths from the COVID-19 pandemic. Nationwide, life expectancy declined by 1.5 years between 2019 and 2020.

- Life expectancy in Nevada County declined 1.1 years between 2019 to 2020. Overall life expectancy among residents in 2019 was 81.3 years. In the first year of the COVID-19 pandemic this declined to 80.2 years.

- Despite declines, life expectancy in 2020 in Nevada County (80.2 years) remained higher than the nationwide average (77.0 years) by 4.2 years and state average (79 years) by 2.3 years.

Average Life Expectancy at Birth, 2020
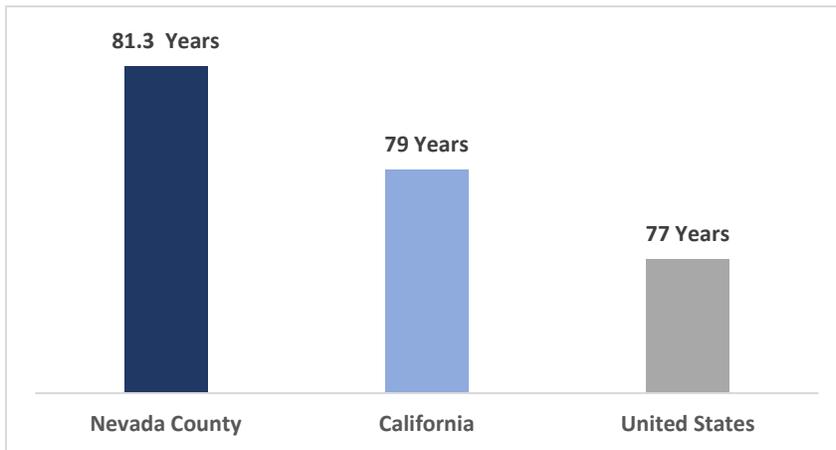
Data Source: National Center for Health Statistics,
U.S. State Life Expectancy at birth by Sex, 2020 (cdc.gov)

Life Expectancy by Sex and Race/Ethnicity

Life expectancy is a key summary measure of disparity and can show differences in mortality between population subgroups. Limited data are available for Nevada County by race/ethnicity due to small sample size.

- Differences by sex in life expectancy followed national trends. Female residents (84.9) were expected to live on average 4.9 years longer than males (80.0) in Nevada County.

- There are too few cases to protect confidentiality and/or report reliable rates for all race/ethnicities. Therefore, Nevada County life expectancy by race/ethnicity groups were not reported in this report.

Average Life Expectancy at Birth by Sex, 2016-2020.
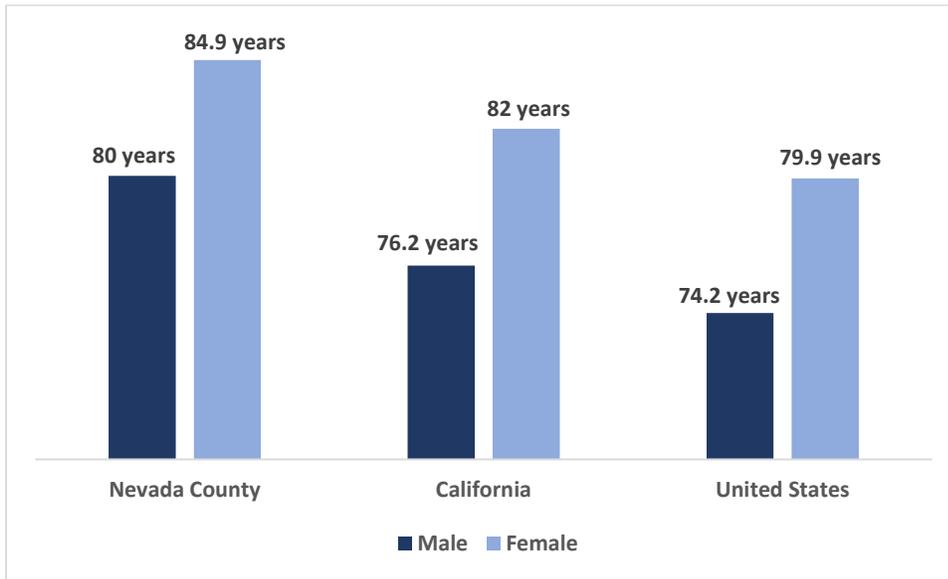
Data Source: National Center for Health Statistics, U.S. State Life Expectancy at birth by Sex, 2020 (cdc.gov), 2022 Nevada County Health Assessment Core Module

All-Cause Mortality

All-cause mortality refers to all the deaths that occur in a population regardless of the cause. Tracking all-cause mortality provides information about whether an excess of deaths has occurred. This is important to examine in reference to COVID-19 as deaths by COVID-19 could be assigned to other causes of death. This could happen if COVID-19 was not listed on the death certificate. All-cause mortality is the opposite of life expectancy – when all-cause mortality goes down, life expectancy goes up, and vice versa. In Nevada County, between 2019-2020, all-cause mortality increased, and life expectancy decreased.

- In Nevada County, the age-adjusted rate of mortality was less than the state average in 2019. In the county there were 596.7 deaths per 100,000 population compared to the state rate of 608.5 deaths per 100,000 population.
- Over a period of 21 years from 2000 to 2021, all-cause mortality was consistently higher for males compared to females within the county, following similar state and national trends.

- Between 2000 to 2021, all-cause mortality trends differed among different race and ethnicity groups within the county. White residents saw a general decline over the 21-year period. Among minority groups within the county, mortality increased between 2012 and 2020 for AIAN residents and decreased for Latino residents.

- Regionally, between 2016-2020, western Nevada County had the highest rates of all-cause mortality compared to eastern Nevada County.

- In 2020, Black residents (973.2 deaths per 100,000 population) in Nevada County had the highest annual death rates compared to White (655.8 deaths per 100,000 population) and AIAN (572.2 deaths per 100,000 population).

Age-Adjusted Mortality Rate (per 100,000 population) by Race/Ethnicity in 2020
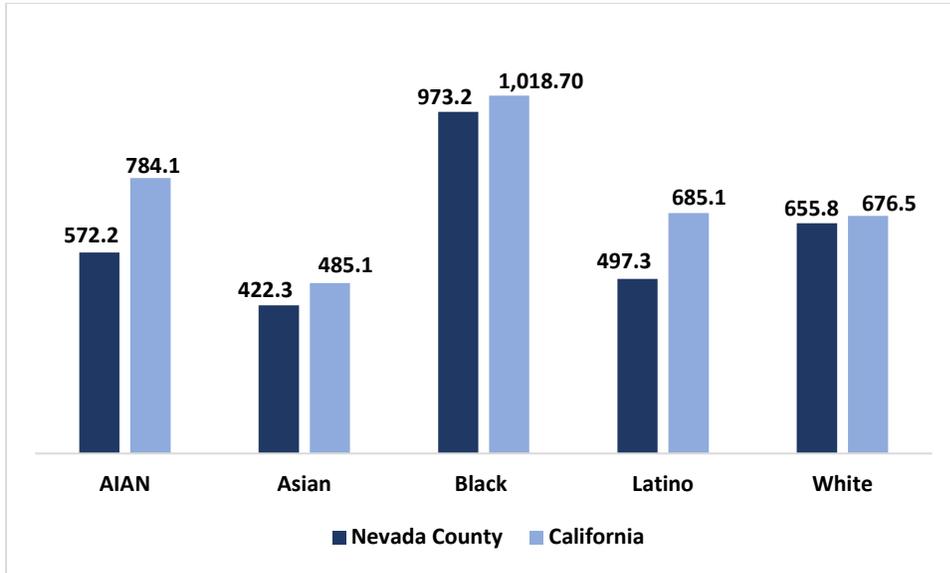
Data Source: Nevada County Health Assessment Core Module 2022 : 2022-Nevada-Health-Assessment-Core-Module

Age-Adjusted All-Cause Mortality Trends Overall and by Sex at Birth, 2000-2020
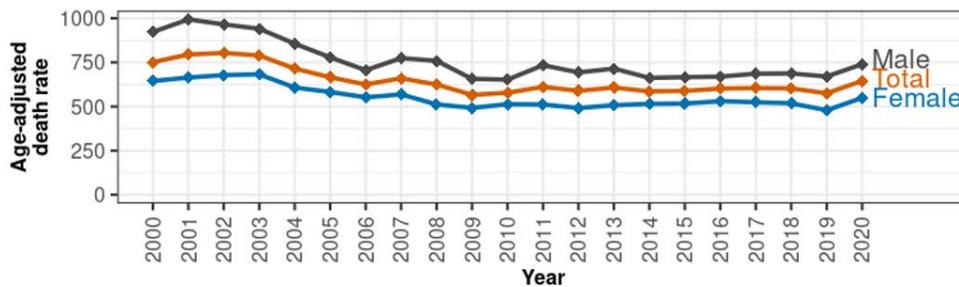
Data Source: Nevada County Health Assessment Core Module 2022 Update https://www.nevadacountyca.gov/2022-Nevada-Health-Assessment-Core-Module

Age-Adjusted All-Cause Mortality Trends by Race/Ethnicity, 2000-2020
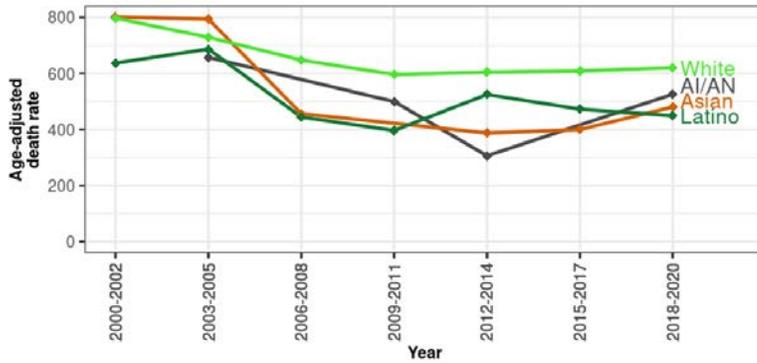
Data Source: Nevada County Health Assessment Core Module 2022 Update https://www.nevadacountyca.gov/2022-Nevada-Health-Assessment-Core-Module

Leading Cause of Death

There are many ways to view the health status of a community including the number of deaths, years of life lost, and increased death rates. These multiple measures are used to identify public health challenges in Nevada County in 2020 and 2021.

Leading causes of death data represent the most frequently occurring reasons for death among causes that are eligible to be ranked. Causes of death are generally ranked in broad categories. For example, specific forms of cancer, like lung cancer, are grouped into the broad category of "cancer." This form of death data collected via death certificates and analyzed to monitor trends, identify health challenges, assess the effectiveness of interventions, and aid public health in making decisions that can save lives.

The top two leading causes of death in Nevada County during the first year of the COVID-19 pandemic were Alzheimer's disease and ischemic heart disease (coronary artery disease or CAD). This differed from the state of California, where the second overall leading cause of death was COVID-19.

- In Nevada County, COVID-19 was the fourth leading cause of death in 2020 and the third leading cause of death in 2021.

Leading Causes of Death, 2020

Measure	Nevada	CALIFORNIA
Leading Causes of Death based on Age-Adjusted Death Rate (per 100k Pop) in 2020	1. Alzheimer's disease (71.5)	1. Ischemic heart disease (80.9)
	2. Ischemic heart disease (59.0)	2. COVID-19 (65.6)
	3. Drug overdose (39.9)	3. Alzheimer's disease (60.9)

Data Source: Nevada County Health Assessment Core Module 2022 Update https://www.nevadacountyca.gov/ 2022-Nevada-Health-Assessment-Core-Module

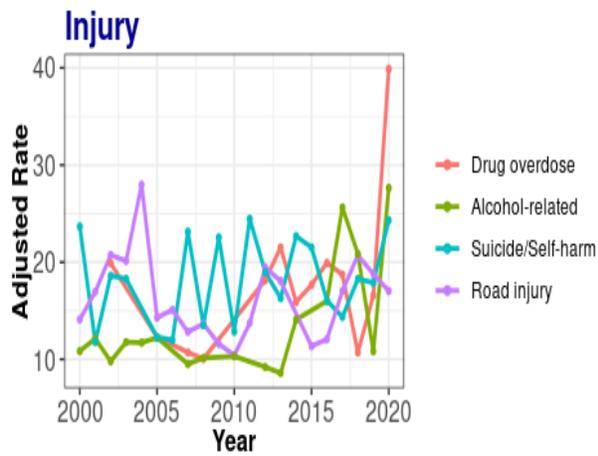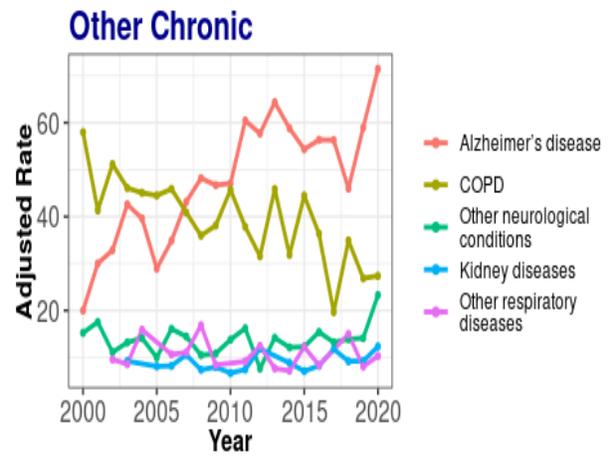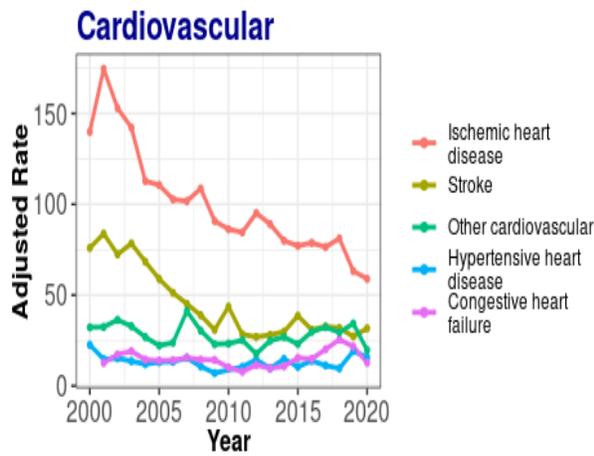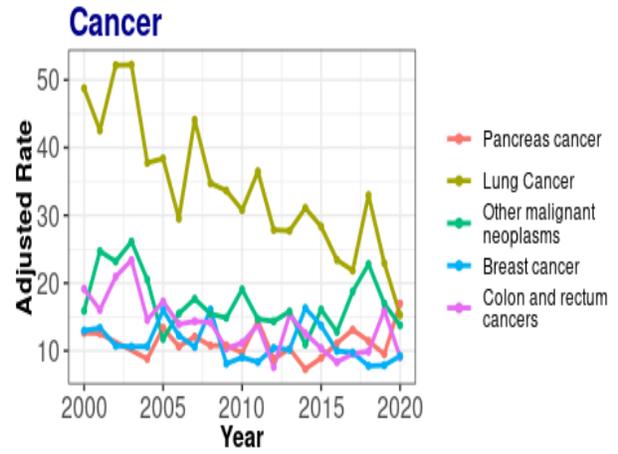Causes of death are categorized within five broad conditions: chronic disease, communicable disease, cardiovascular diseases, injury/violence, and cancer (malignant neoplasms). The table and the graph below show age-adjusted death rate (per 100,000 population) for leading causes of death in 2020 and number of deaths overall for 2020 to 2021.

- Four out of the five leading causes of death in 2020 and 2021 were due to chronic diseases.

- Over a 21-year period from 2000 to 2021, Nevada County saw a decline in ischemic heart disease (Coronary artery disease or CAD), lung cancer, pneumonia, and chronic obstructive pulmonary disease (COPD).

- Between 2000 and 2021 Alzheimer's disease steadily increased in Nevada County.

- Injury-related causes of death have fluctuated over the 20-year period. Specifically, death by drug overdoses, which saw a decline in 2018, steadily increased between 2018-2021.

Number of Deaths Due to Leading Causes in Nevada County- 2020 and 2021
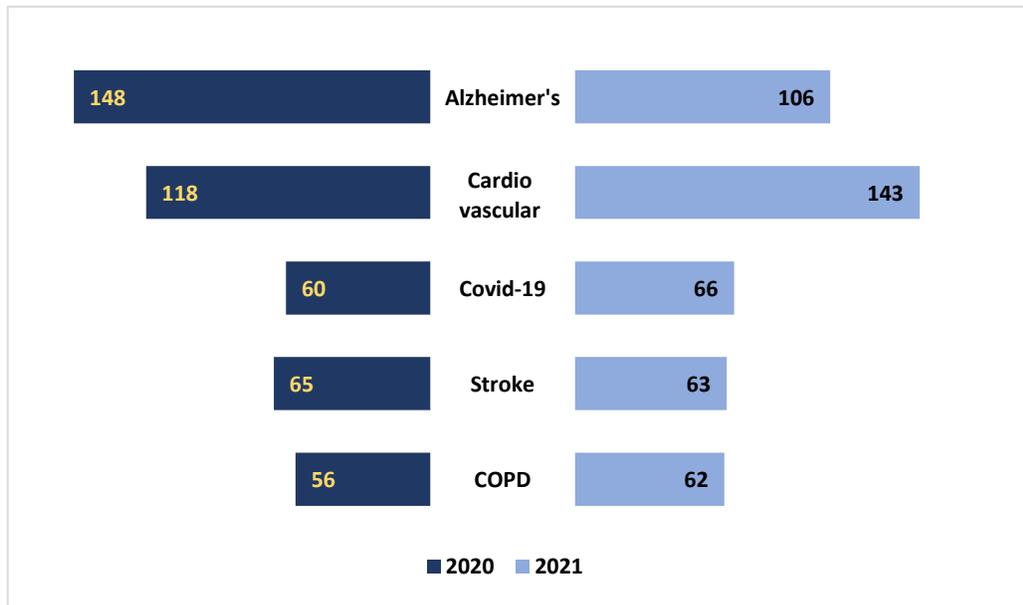
Data Source: Nevada County Health Assessment Core Module 2022 Update
https://www.nevadacountyca.gov/DocumentCenter/View/47268/2022-Nevada-Health-Assessment-Core-Module
Note: Data in this table shows the leading cause, rate per 100,000, and the number of deaths within Nevada County .

Years of Life Lost

Years of life lost (YLL) consider the age at which a death occurs, giving greater weight to deaths that occur at a younger age and less weight to those that occur at an older age. YLL accounts for both the frequency of deaths and the age of the death. For example, a young adult that dies from an injury has more years of life lost compared to an older adult that dies from a chronic disease. Therefore, YLL is an estimate of the years that that person would have lived if they had not died prematurely. This is

reported as a rate per 100,000. In Nevada County, in 2021, drug overdose deaths accounted for the highest number of years of life lost at a rate of 1,062 years per 100,000. Preventable deaths in the United States increased 16.1% in 2020 to 200,955, an all-time high. A 34.4% increase in drug overdose deaths helped drive this record high. The opioid epidemic was likely exacerbated by the overall disr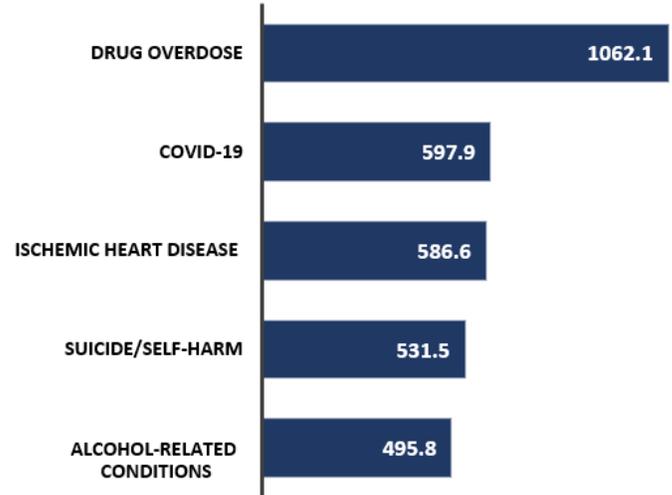uptions and stress induced by the COVID-19 pandemic and preventable opioid overdose deaths increased 41% in 2020 (CDC, NCHS).

Nevada County Cause of Death Trends by Age-adjusted Death Rate of Top Public Health Conditions within Broad Condition Groups, 2000-2020

Communicable
Legend: COVID-19, Pneumonia, Other Infections/Nutritional

Cancer
Legend: Pancreas cancer, Lung Cancer, Other malignant neoplasms, Breast cancer, Colon and rectum cancers

Cardiovascular
Legend: Ischemic heart disease, Stroke, Other cardiovascular, Hypertensive heart disease, Congestive heart failure

Other Chronic
Legend: Alzheimer's disease, COPD, Other neurological conditions, Kidney diseases, Other respiratory diseases

Injury
Legend: Drug overdose, Alcohol-related, Suicide/Self-harm, Road injury

Data Source: Nevada County Health Assessment Core Module 2022 Update
https://www.nevadacountyca.gov/DocumentCenter/View/47268/2022-Nevada-Health-Assessment-Core-Module

Years of Life Lost (YLL) Due to Leading Causes in 2020 and 2021 in Nevada County

YLL rate per 100K population in Nevada County - 2020
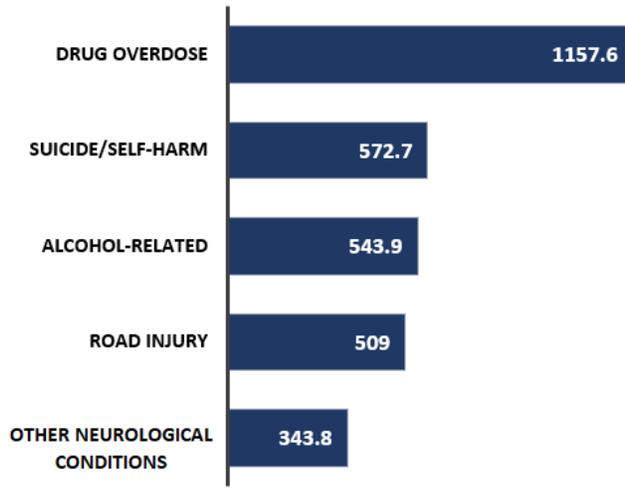
Cause	Rate
DRUG OVERDOSE	1157.6
SUICIDE/SELF-HARM	572.7
ALCOHOL-RELATED	543.9
ROAD INJURY	509
OTHER NEUROLOGICAL CONDITIONS	343.8

YLL rate per 100K population in Nevada County - 2021

Cause	Rate
DRUG OVERDOSE	1062.1
COVID-19	597.9
ISCHEMIC HEART DISEASE	586.6
SUICIDE/SELF-HARM	531.5
ALCOHOL-RELATED CONDITIONS	495.8

Data Source: Nevada County Health Assessment Core Module 2022 Update: 2022-Nevada-Health-Assessment-Core-Module .
Note: Above bar charts show the cause by rank and rate of years of life lost per 100,000

- Drug overdoses in Nevada County accounted for the highest number of YLL in 2020 and 2021. Between 2019 and 2020, drug overdoses increased 141% and alcohol-related deaths increased 155%.

- In 2021, COVID-19 was the second leading reason for YLL and resulted in a rate of 597.9 years of life lost per 100,000 in Nevada County.

- Suicide/self-harm and substance use, specifically alcohol related issues, remained in the top five reasons for YLL among Nevada County residents between 2020 and 2021.

Drug Overdose Data

In the last few years, drug overdoses have continued to have significant impacts in our communities. Drug overdoses are the leading cause of years of life lost in Nevada County. This data shows the trends over time and differences in drug overdose rates across sex. Race and ethnicity data were only available for White residents due to low numbers of drug overdose data for other racial and ethnic minorities within Nevada County.

Drug overdose deaths increased in Nevada County between 2018 and 2020, which resulted in a 20-year high at 39.9 deaths per 100,000 residents. In 2020, the rate of drug overdose deaths in Nevada County was nearly double the overall state rate of 21.6 drug overdose deaths per 100,000.

- Males had higher rates of drug overdose deaths and alcohol-related death rates in 2020 than females.

- Drug overdose deaths among males (60.52 deaths per 100,000 residents) in Nevada County were two times higher than males in California (31.94 deaths per 100,000 residents).

- Drug overdose deaths between 2018 and 2020 were highest among adults between 25-34 years of age (50 deaths per 100,000 residents).

Age-Adjusted Drug Overdose Death Rates by Sex in Nevada County, 2000-2020
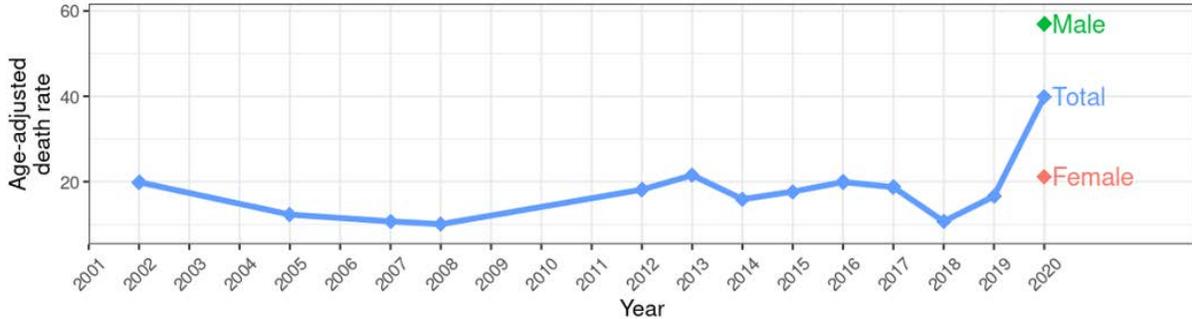
Data Source: Nevada County Health Assessment Core Module 2022 Update
2022-Nevada-Health-Assessment-Core-Module

Nevada County Opioid Overdose Snapshot -2021

Nevada County experienced 28 opioid-related overdose deaths in 2021, the most recent full year of data available. The annual crude mortality rate for 2021 was 28.57 per 100k residents, an increase of 186% from 2019. The map below displays the annual age-adjusted rates (per 10,000 population) for any opioid-related overdose deaths by zip code in Nevada County. The age-adjusted death rate for opioid overdose was higher in the western part of the county compared to the eastern parts. County specific opioid overdose data reported in this section were from California overdose surveillance data. For further details please refer the County specific data available in the California Overdose Surveillance Dashboard.
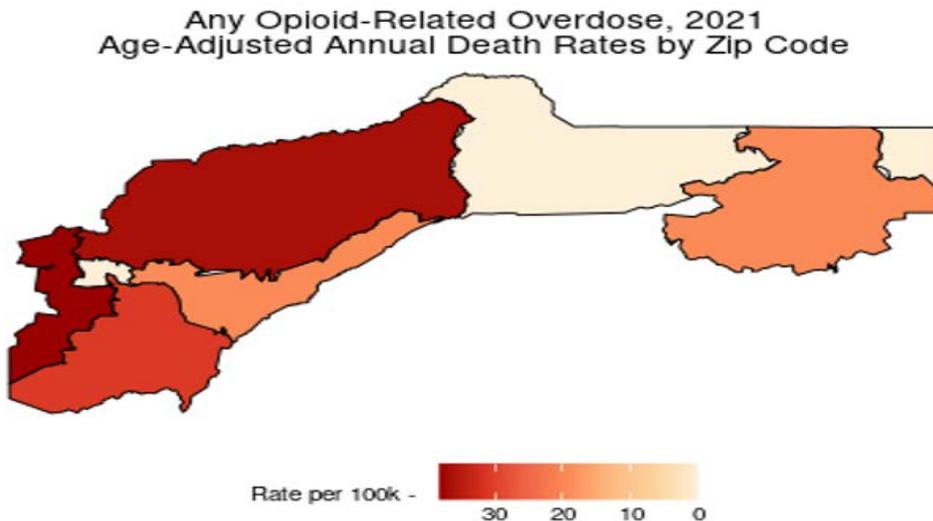
Data Source: California Overdose Surveillance Dashboard
https://skylab.cdph.ca.gov/ODdash/?tab=Nevada County

Opioid-Related Overdose Deaths by Sex, Age and Race/Ethnicity – 2021

Adults aged 55-64 years followed by 30-45 years experienced greatest opioid overdose deaths (with crude death rates 87.28 and 89.24 per 100,000 population respectively) in 2021. Adults aged 45-49 years also reported to have significantly higher death rate (83.32 deaths per 100,000 population). Black residents were reported to have significantly higher age-adjusted death rate (168.67deaths per 100,000 population) followed by AIAN (111.9 deaths per 100,000 population). Like the previous years, male residents had the highest age-adjusted opioid overdose death rate (44.4 deaths per 100,000 population) compared females (18 deaths per 100,000 population) in 2021.

Any Opioid-Related Overdose Deaths in Nevada County -2021

Race/Ethnicity	Age-Adjusted Death rate100K population
White	33.61
Black/African American	**168.67**
Hispanic/Latino	24.19
Native American/Alaska Native	111.99
Asian/Pacific Islander	*

Data Source: California Overdose Surveillance Dashboard https://skylab.cdph.ca.gov/tab=Nevada County
Note: *Data for Asian/Pacific Islander not reported. There were too few cases to protect confidentiality.

Opioid-Related Overdose Death Rate (per 100K population) by Age in Nevada County 2021

Data Source: California Overdose Surveillance Dashboard
https://skylab.cdph.ca.gov/ODdash/?tab=Nevada County
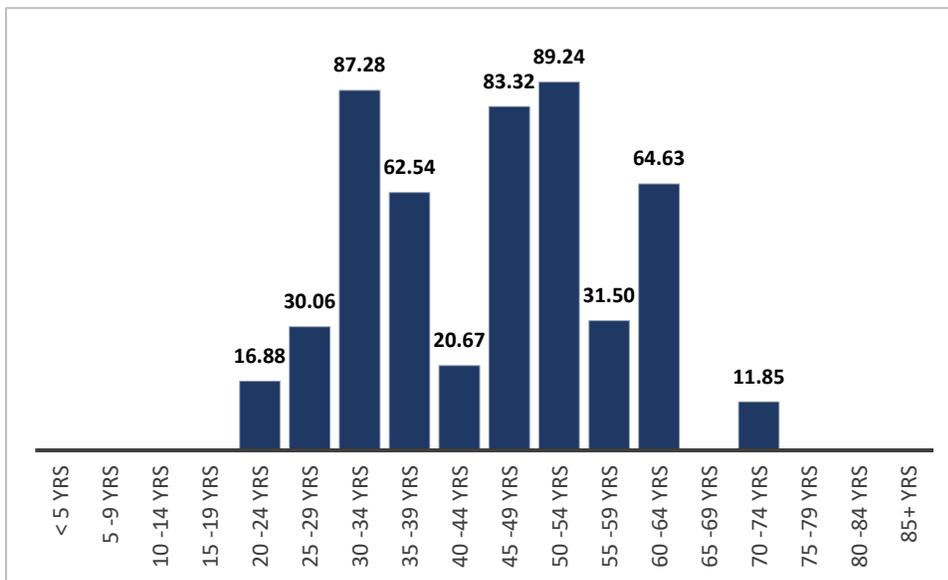
Opioid Prescription in 2021

There were 61,960 prescriptions for opioids in Nevada in 2021. The annual crude opioid prescribing rate for 2021 was 619.72 per 1,000 residents. This represents a 16% decrease in prescribing from 2019. Synthetic opioid overdose deaths are largely related to fentanyl in the county. In the year 2021, 64.5 visits (per 100k residents) to emergency department and 16.2 (per 100k residents) hospitalization were related to any opioid overdose. Buprenorphine prescriptions in the county are used to gauge the expansion of medications for opioid use disorder (MOUD). The annual crude buprenorphine prescribing rate for 2021 was 68.48 per 1,000 residents. This represents a 5% increase in buprenorphine prescribing from 2019.

Social Determinants of Health and Place

Social Determinants of Health and PLACES Data

Social Determinants of Health (SDOH) are the conditions in the environments where people are born, live, work, play, worship, and age that affect a wide range of health, functioning, and quality of life outcomes and risks. PLACES, a collaboration between CDC, the Robert Wood Johnson Foundation, and the CDC Foundation, provides health data for small areas across the country. PLACES data are provided at the county, census, or ZIP Code level. This section describes the relationship of two SDOH variables with age-adjusted death rates. This lays the foundation for a more in-depth exploration of relationships between SDOH and PLACE, including specific causes of death, additional social determinants, specific demographic groups, multiple geographies, and trends over time.

The two selected social determinants are: (1) community-level poverty rates (percent of community <150% of Federal poverty level); and (2) community-level educational attainment (percent of community with high-school education or less). Data from the American Community Survey, 2015-2019 was used to compare the SDOH outcomes and context for Nevada County.

Relationship Between Life Expectancy, Poverty, and Educational Attainment Nevada County, 2016-2020

Educational attainment refers to the highest level of education that an individual has completed. Examining relationships between poverty and life expectancy locally can inform public health programs and policy.

- Following state trends, communities within Nevada County with high levels of poverty and low levels of education (higher percentage of the population with high school degree or less) had higher age-adjusted mortality rates.

- In Nevada County, 21.95% of the population have a high-school diploma or less and 18.1% live in poverty. County wide, the age-adjusted death rate was higher (625.7 deaths per 100,000 population) for 2018-2020 compared to the state (625.4 deaths per 100,000 population).

Poverty, Educational Attainment, and Age-Adjusted Death in Nevada County, 2016-2020

MSSA ID	MSSA*	Life Expectancy	Age-Adjusted Death Rate	# of deaths	Poverty	HS Grad or Less	Population
113 & 114	Grass Valley/Nevada City/Penn Valley/Rough and Ready/Wildwood/ North Bloomfield/North San Juan/Truckee	80.9	587.9	5,158	18.05%	21.95%	98,185

Data Source: Centers for Disease Control and Prevention PLACES: Local Data for Better Health *MSSA – Medical Services Study Area

Relationship between Poverty and Educational Attainment and Mortality within Nevada County, 2016-2020
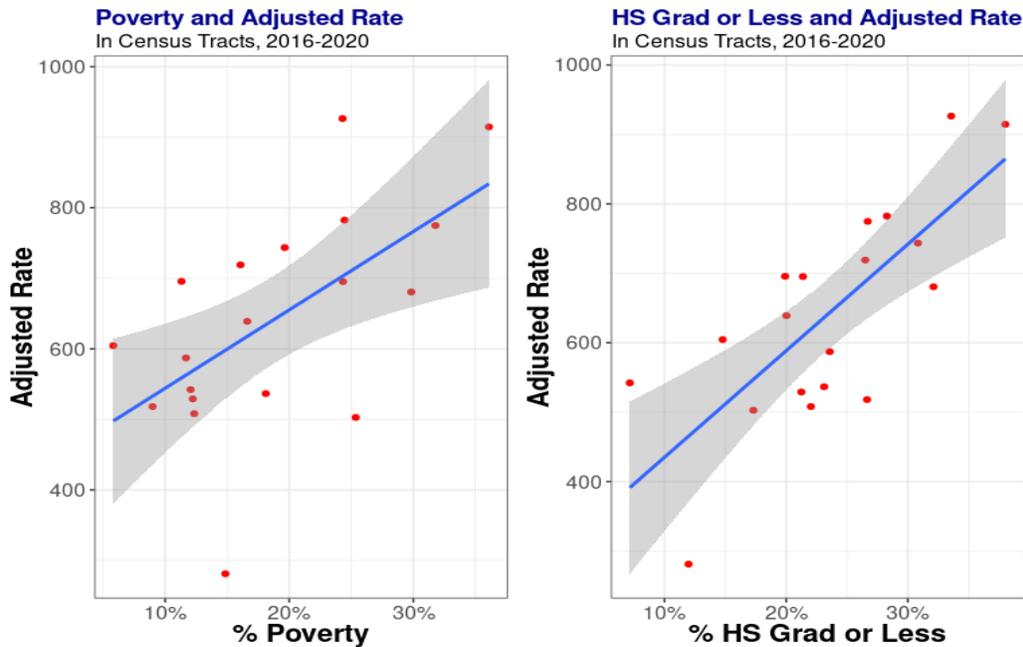
Data Source: Centers for Disease Control and Prevention PLACES: Local Data for Better Health

Description: In these scatterplots, each point represents a census tract (small, relatively stable geographic area that usually have a population between 2,500 and 8,000) in Nevada County and its position for the selected social determinant (poverty and educational attainment) and health outcome (life expectancy). In other words, each point represents one census tract region and where they fall in terms of the percent of the population in poverty and the age-adjusted mortality rate. The grouping of

points follows along a trend line that reflects the direction of relationship. In these cases, the data shows that communities with high poverty and low levels of education have higher mortality.

Climate Change and Health in Nevada County

NCDPH is focused on using the best available climate science to: (1) project likely climate impacts; (2) identify climate-related health risks and populations vulnerable to these impacts; (3) assess the added burden of disease and injury that climate change may cause; (4) identify appropriate interventions; (5) plan more resilient communities; and (6) evaluate to improve the planning effort. Communities with economic, environmental, and social disadvantages are likely to bear the disproportionate health impacts of climate change.

The CDPH Climate Change and Health Profile Report Nevada County, published in 2017, provides a county-level summary of current and projected risks and potential health impacts of climate change. Projections are based on two emission scenarios, high and low, which describe the two extremes of how greenhouse gas emissions could evolve between 2000 and 2100. Where available the following climate projections show both possibilities.

Temperature Changes

- During the next few decades, temperatures in California are projected to rise an average of 1°F to 2.3°F. The projected temperature increases begin to diverge at mid-century so that, by the end of the century, the temperature increases projected in the higher emissions scenario are approximately twice as high as those projected in the lower emissions scenario.

- In Nevada County, temperatures are expected to rise substantially throughout this century. Projections estimate the temperature will rise between 4°F and 6.9°F depending on the level of emissions.

Climate Change and Socioeconomic Disruption

Widespread social and economic disruption includes damage to the infrastructure for the delivery of health services and for general economic well-being. Health care facilities, water treatment plants, and roads for emergency responders and transportation for health care personnel can be damaged in climate-related extreme weather events. Increased burden of disease and injury will test the surge capacity of health care facilities. Economic disruption can lead to income loss, income insecurity, food insecurity, housing insecurity, and mental health problems, which, in turn, may increase substance abuse, suicide, and other health problems [3,4].

Certain populations and communities are more susceptible to the health risks associated with climate change. For example, individuals with asthma are particularly at risk when there is poor air quality, which occurs frequently with wildfires. Different health outcomes, social vulnerabilities, and climate risks can increase health risks of climate change for Nevada County residents.

Health Outcomes

- In 2011-2012, two out of five residents in Nevada, Plumas, and Sierra counties had multiple chronic conditions (data is pooled from multiple counties due to low numbers). Additionally, one in seven adults had been diagnosed with asthma. These individuals are at increased risk of negative health outcomes due to climate change.

Social Vulnerabilities

- People aged 65 and older are especially vulnerable to the health impacts of climate change such as extreme heat [9]. This is a vulnerability for Nevada County which has an older population compared to neighboring counties. In 2019, 28% of the population in Nevada County were over the age of 65.

- In 2009, 35% of households in Nevada County did not have air conditioning (statewide average was 36%). Air conditioning can help counter negative effects of heat. Data from 2011 showed that tree canopies, which provide shade and other environmental benefits and protection from the heat, were present on 48% of the land (statewide average was 8%)

Climate Risks

- Four out of five (80%) of Nevada County residents live in a high-risk wildfire area.

Some of the changes due to climate change will occur over the long term, but broad shifts in our weather can be seen now and will result in many direct and indirect health risks. Risks include extreme weather-related injury, displacement, and mental health, heat-related illnesses, vector-borne illnesses, food insecurity, and overall socioeconomic disruption. A critical step is to improve capacity of communities to prepare, respond, and recover from climate-related health risks. Steps need to be taken to ensure that the most vulnerable populations have access to information, services, and resources to prepare and respond to climate risks.

COVID-19 in Nevada County

The 2019 Nevada County CHNA/CHA, designed to address and identify local needs, was completed prior to the start of the global 2019 Novel Coronavirus (COVID-19) pandemic. The COVID-19 pandemic brought about new and unforeseen challenges that impacted the health and wellbeing of communities. NCPHD felt the magnitude of the health impacts of this global crisis locally warranted closer examination. This section focuses on the burden of COVID-19 on Nevada County residents, its disproportionate impact on certain communities. Most of the COVID-19 data reported here were from the start of January 2020 thru February 2023 unless otherwise noted.

COVID-19 Cases, Hospitalizations, and Deaths

Nevada County specific COVID-19 data were obtained from the California Reportable Disease Information Exchange (CalREDIE), an electronic disease reporting and surveillance system that tracks COVID-19 cases, hospitalizations, and deaths.[1] The first case of COVID-19 in Nevada County was reported March 16, 2020.

Nevada County COVID-19 Confirmed Cases, Hospitalizations, and Deaths
(January 1st, 2020 to February 28th, 2023)

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[1] Confirmed cases used in this analysis and displayed here had to meet the definition of the CalREDIE user guide. For cases, the Event Date (date that specimen of positive test was taken, or date of symptom onset as reported in case interview if specimen collection date is not known) must be on or after January 1st, 2020. For hospitalizations, the admission date must be from January 1st, 2020. For deaths, the date of death is after January 1st, 2020 and the case was determined and documented to have been from COVID-19.

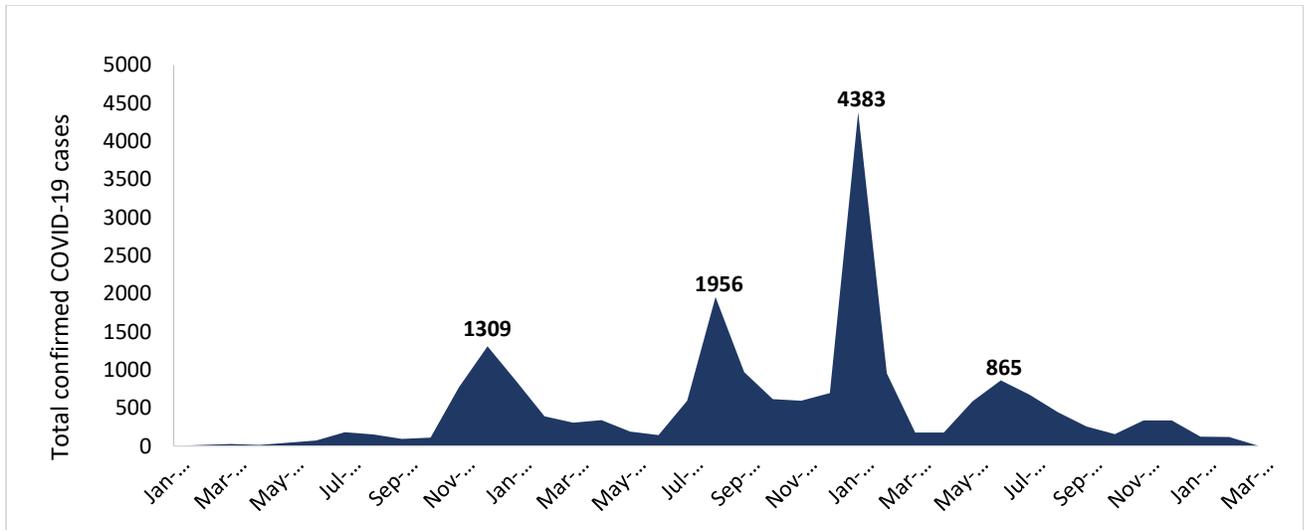| COVID-19 Indicator	Nevada County
Total Confirmed Cases	20,146
Total Hospitalizations	7655
Total Deaths	133

Data Source: California Reportable Disease Information Exchange (CalREDIE)

COVID-19 Monthly Trends

Nevada County has seen three distinct surges of the COVID-19 pandemic, with the highest number of positive weekly cases reported in January 2022. SARS-Cov-2, the virus that causes COVID-19, is constantly changing. These changes occur over time. Variants of the virus, including Alpha, Beta, Delta, and Omicron, influenced the surges in positive case rates and hospitalizations.

- COVID-19 hospitalizations lagged behind COVID-19 case spikes. This occurred because the virus took time to cause severe disease that required hospitalization. The first surge in Nevada County occurred in December 2020, the first peak for hospitalizations occurred about four weeks later in January 2021.

- Nevada County saw the highest confirmed cases of COVID-19 in January 2022; however, saw the most COVID-19 hospitalizations in August 2021. This is likely the result of increased COVID-19 vaccinations that reduce severe illness to COVID-19 and differences in symptoms and severity of the variants.

Confirmed COVID-19 Cases in Nevada County, Jan 2020 – Feb 2023

Data Source: California Reportable Disease Information Exchange


Demographics of COVID-19 Cases and deaths in Nevada County

Race/Ethnicity

In 2021, the largest racial/ethnic groups to be laboratory confirmed cases of COVID-19 in Nevada County were Whites (81%) followed by 12.1% of Latino and 2.2% Asian American. Only 0.2% of the total population were Native Hawaiian and other Pacific Islander (NHPI), 1.7% were Black and 1.4% were American Indian and Alaska Natives (AIAN).

- There are approximately four times more White (Non-Hispanic) residents in Nevada County than any other race or ethnicity. Due to this, 84.8% of the COVID-19 positive cases were from the white residents.

- Percentage of cases were not reported for all other small populations in the county because there were fewer than 20,000 people in this group. To protect confidentiality, small numbers were not reported. Further small case numbers raise statistical issues concerning accuracy, and thus usefulness, of the data.

COVID-19 Hospitalizations in Nevada County, Jan 2020 – Feb 2023
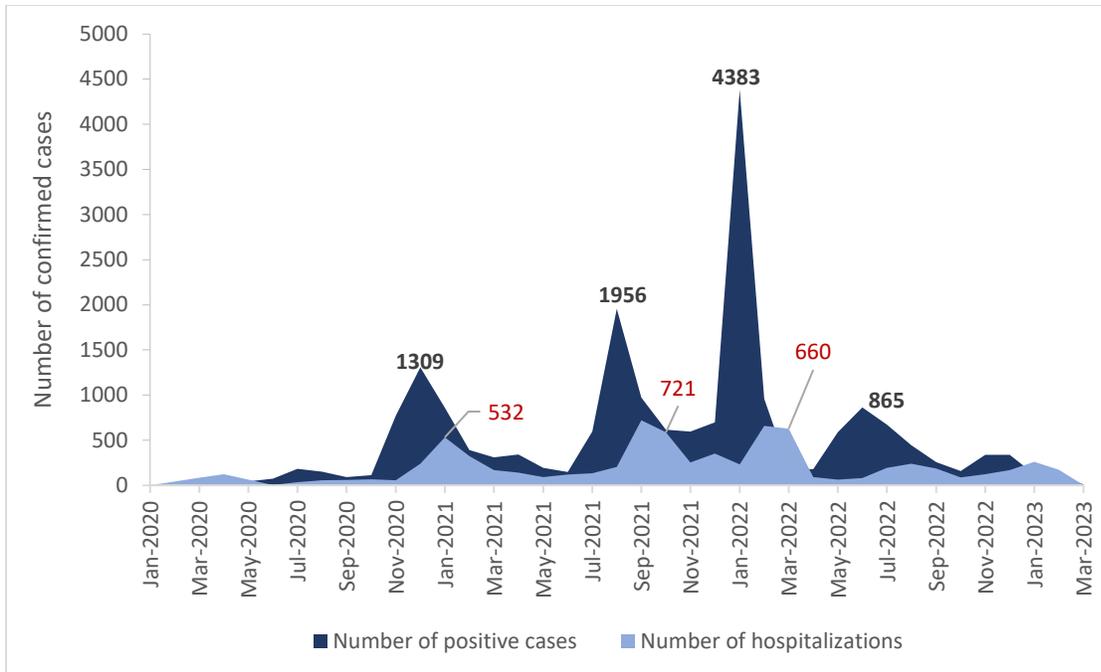
Data Source: California Reportable Disease Information Exchange (CalREDIE)
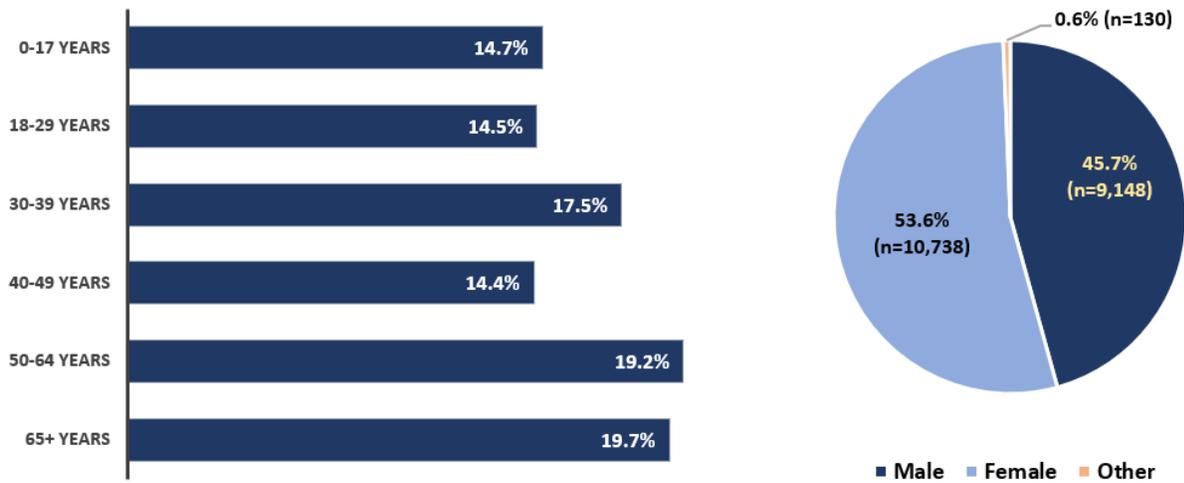
COVID-19 Cases by Age

COVID-19 is known to more seriously affect older populations. Compared to its surrounding counties, Nevada County has the highest percentage of residents over 65 years of age. Adults aged 65 years and above made up 19.7% of cases in Nevada County which was the highest among all age category. Adults aged 30 to 50 years old also reported to have more case rate (19.2%) while severe cases and case fatality rate were higher among those with older age (more than 60 years of age) with underlying health conditions like diabetes and hypertension, etc. Further there were COVID-19 outbreaks in Nevada county skilled nursing facilities in late 2020 which resulted in an increased number of mortalities in elderly population.

Among the 133 total deaths, 79% of deaths were reported in elders aged 65 years and above. 17% of deaths were reported in adults aged 50-64 years. There were either no deaths in other age categories or deaths not shown due to small number of observations.
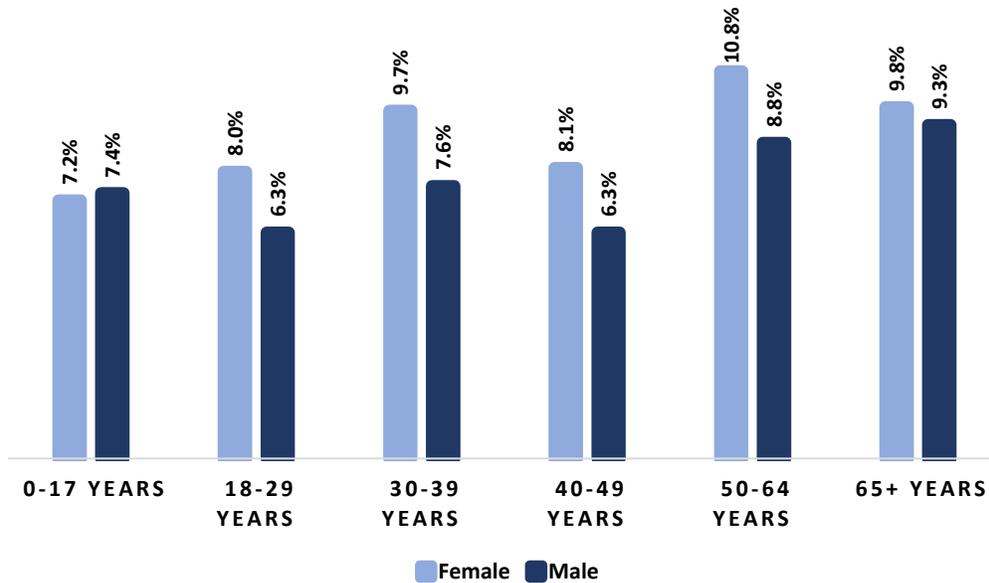
COVID-19 Cases by Sex

In Nevada County, 53.6% of COVID-19 confirmed cases were females and 45.7% were male. 0.6% of cases were seen in people who reported "Other" sexual orientation/gender[2]. Like California, distribution of COVID-19 deaths reveals a disparity between genders, with males (56.2%) having a higher percentage of COVID-19 deaths relative to females (43.2%) in the county.

COVID-19 Cases in Nevada County by Age and Sex

Age	Percentage
0-17 YEARS	14.7%
18-29 YEARS	14.5%
30-39 YEARS	17.5%
40-49 YEARS	14.4%
50-64 YEARS	19.2%
65+ YEARS	19.7%

Pie chart:
- 0.6% (n=130) Other
- 45.7% (n=9,148) Male
- 53.6% (n=10,738) Female

■ Male ■ Female ■ Other

COVID-19 Case distribution in Nevada County by Age and Sex

Age	Female	Male
0-17 YEARS	7.2%	7.4%
18-29 YEARS	8.0%	6.3%
30-39 YEARS	9.7%	7.6%
40-49 YEARS	8.1%	6.3%
50-64 YEARS	10.8%	8.8%
65+ YEARS	9.8%	9.3%

■ Female ■ Male

Data Source: California Reportable Disease Information Exchange (CalREDIE)

Note: Case distribution in "Other" gender category were not reported due to small observations*

[2] "Other" sexual orientation/gender includes those who declined to state, whose gender information is missing, or who identify as transgender, gender non-binary, gender queer, or intersex

COVID-19 deaths in Nevada County by Age a*nd Sex*

65+ years: 79% (n=113)
50-64 years: 17% (n=25)
30-39 years: 4%

Female: 56.2% (n=75)
Male: 43.2% (n=58)
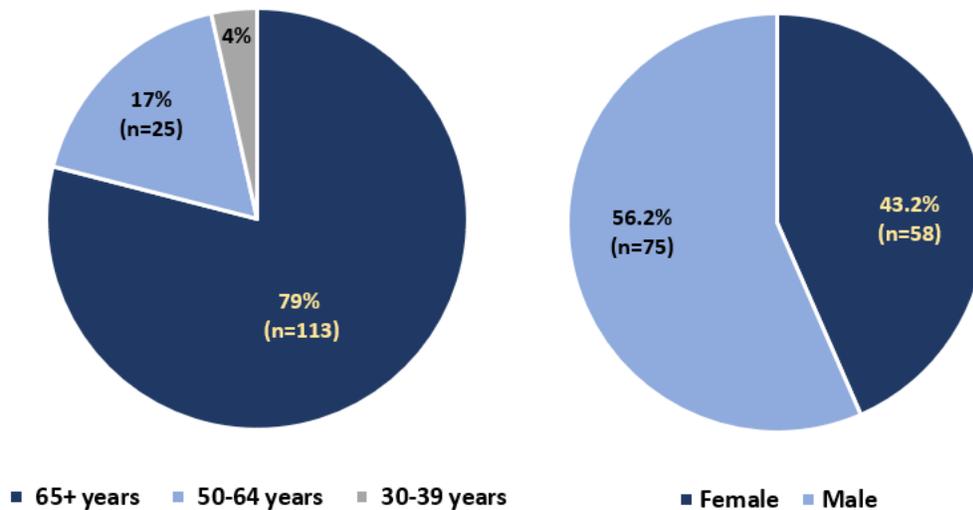
Data Source: California Reportable Disease Information Exchange (CalREDIE)

Note: Death counts were not reported in ages 0-17 years, 18-29 years, and 40-49 years because there were no deaths or death counts not shown due to small number of observations. Death counts in "Other" sexual orientation/gender category were not reported due to small observations*.
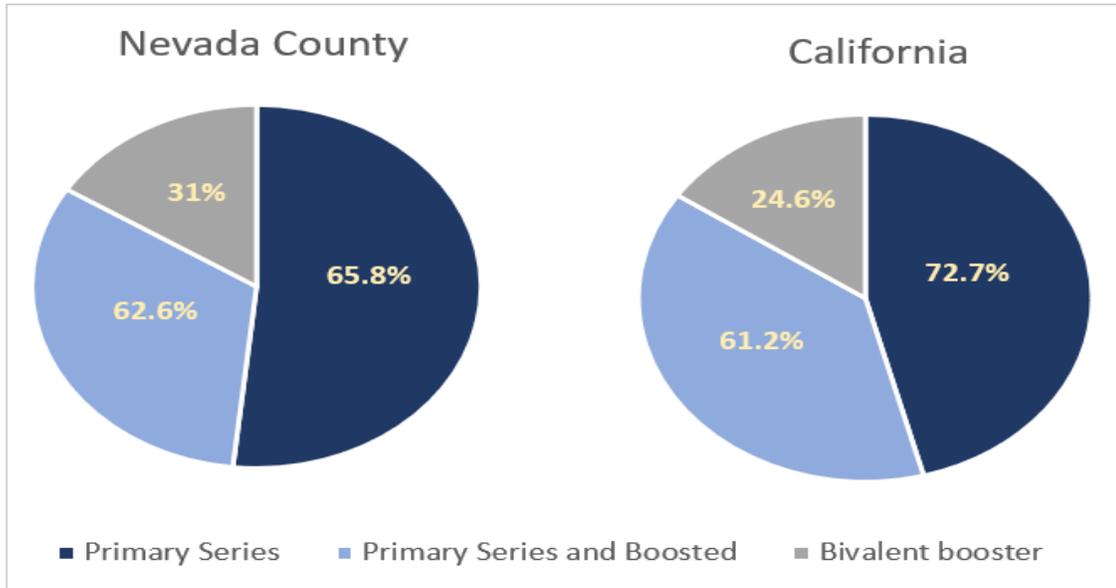
COVID-19 Vaccinations

People are best protected from severe COVID-19 illness when they stay up to date with their COVID-19 vaccines, including getting the primary series and all recommended boosters when eligible. Nevada County ranks 26th out of all 58 California counties for the percent of the population that have received the primary series of the COVID-19 vaccine. State level and Nevada County specific vaccination data were obtained from the State's vaccination progress data dashboard using the following link https://covid19.ca.gov/vaccination-progress-data. Vaccination data reported here were from February 28th, 2023.

COVID-19 vaccines administered in Nevada County

A total of 203,273 doses of COVID-19 vaccines were administered in Nevada County as of February 28th, 2023. Throughout the county, 98,017 people were eligible for primary series and 64,348 people were eligible for primary plus booster dose and Bivalent booster dose. Among the eligible population 64,486 (65.8%) of people had primary series, 40,292 (62.6%) had primary series plus a booster dose and 19,978 (31%) had bivalent booster dose.

- In Nevada County, 65.8% of the eligible population have received the primary series of the COVID-19 vaccine. This is lower than the 72.7% of California residents who have received the primary series.
- Among Nevada County residents, 62.6% have completed the primary series in addition to a booster dose. This is slightly higher than the 58.5% of the California population that have received the primary series and booster.
- 31% of Nevada County residents have completed bivalent booster dose which is comparatively higher than the 24.6% California population that have received the bivalent booster dose.

COVID-19 Vaccination Rates in Nevada County and California (as of Feb 28th, 2023)

Data source: Tracking COVID-19 in California Unvaccinated and Vaccinated data

Vaccinations by ZIP Code or Vaccine Equity Metric

The state of California established the Vaccine Equity Metric (VEM), which helps guide vaccination response to ensure equity across groups and communities. The VEM uses the California Healthy Places Index (HPI), which maps data on social conditions that drive health like education, job opportunities, clean air and water, and other indicators that impact health and life expectancy. Together, with HPI data and CDPH-identified scores, the VEM shows vaccine status across ZIP Codes. ZIP Codes range from less healthy community conditions in Quartile 1 to more healthy community conditions in Quartile 4. Most Nevada County's ZIP Codes fall within Quartile 3 (52%) and Quartile 4 (20%).

Overall, vaccination rates vary across Nevada County. Communities with the healthiest conditions have the highest rates of vaccination; at the end of February 2023, about 67% of populations in Quartile 3 and 55.8% of Quartile 4 have received the primary vaccine series. 64.1% of quartile 3 and 62% of quartile 4 populations have received primary plus booster doses.

Percent of Population Vaccinated in Nevada County ZIP Codes and Vaccine Equity Metric (VEM)

VEM Quartile	ZIP Code	Community	Percent Fully Vaccinated
2	95945	Grass Valley	61.3%
	95960	North San Juan	93.2%
3	95975	Rough and Ready	49.1%
	95949	Grass Valley	55.3%
	95959	Nevada City	65.2%
	95946	Penn Valley	67.6%
4	96111	Floriston	58.3%
	96161	Truckee	66.1%

Data Source: California Department of Public Health COVID-19 Vaccine Equity Metric

Vaccinations by Age and Sex

Factors such as sex, age, and income can influence an individual's health and risk for infectious or chronic disease. Early studies of the pandemic show that age increased vulnerability to negative outcomes of COVID-19 illness including health complications, hospitalizations, and death [5,6]. This increased the likelihood of older Nevada County residents and healthcare services being significantly more impacted as early data showed older adults were more likely to get sick and need hospitalization, intensive care, or a ventilator to help them breathe. In 2019, adults over the age of 65 accounted for 28% of the Nevada County population.

In Nevada County, rates of COVID-19 vaccination vary by age, individuals over 50 years of age are most likely to be vaccinated.

- Older adults have the highest vaccination rates in Nevada County; 80.6% of eligible adults aged 65+ have received the primary series of the COVID-19 vaccination.

- Children under the age of 11 have the lowest rates of vaccination in Nevada County; only 33.9% of the eligible population have received the primary series of the COVID-19 vaccine.

- Females are more likely than males to be vaccinated. Vaccination rates show 66% of females and 59% of males are vaccinated in Nevada County.

Vaccine Progress by Age in Nevada County

Age in Years	Eligible Population	Number of People Vaccinated	Percent of Eligible Population Vaccinated
Under 5	3910	290	7.4%
5-11	5687	1,898	33.4%
12-17	5576	3,273	58.9%
18-49	34,085	20,324	59.6%
50-64	19,621	14,778	75.3%
65+	29,138	23,920	82.1%

Data Source: California Department of Public Health COVID-19 Vaccine Equity Metric

Primary Series Status by Age in Nevada County (as of February 28th, 2023)
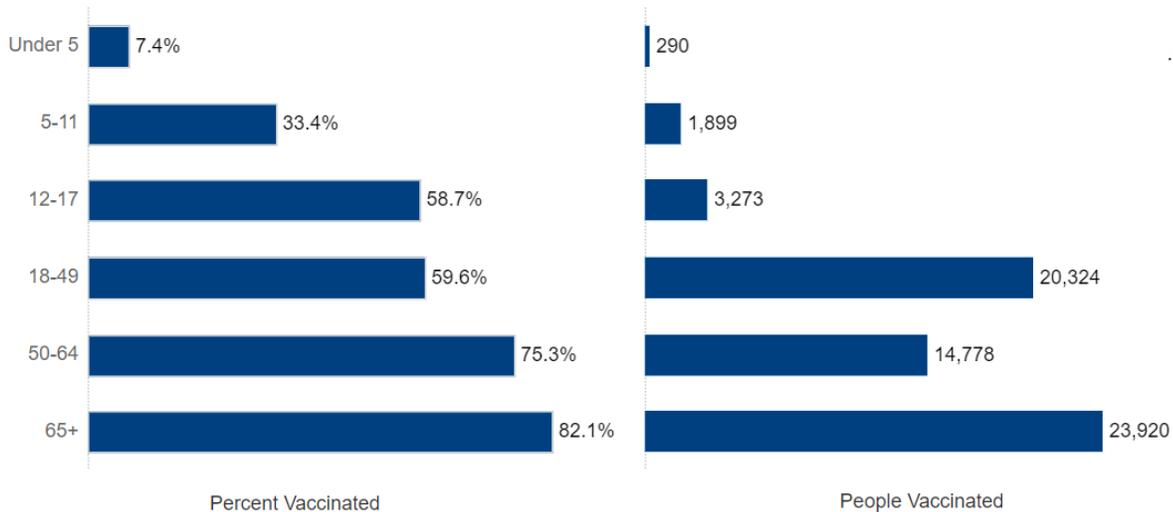
Vaccination by Race/Ethnicity

Racial and ethnic minority groups have been disproportionately affected by the COVID-19 pandemic. The rate of infection, hospitalization, and death were highest for racial and ethnic minority groups in Nevada County. Equitable access and receipt of COVID-19 vaccinations is important in reducing negative outcomes due to the disease and increasing differences in vaccination rates across all races and ethnicities. The rate of eligible residents that had received the primary series of the COVID-19 vaccination is similar across most racial and ethnic groups in Nevada County.

- Native Hawaiian and Pacific Islander (NHPI) residents had the highest rates of vaccination; 71.8% of eligible NHPI residents have received the primary series of the vaccine followed by American Indian and Alaska Native residents at 68.3%.

Vaccine Progress by Race/Ethnicity in Nevada County

Race	Eligible Population	Number of People Vaccinated	Percent of Eligible Population Vaccinated
White	80,152	53,447	66.7%
Multi-Race	5,466	1,607	29.4%
Latino	5,226	5,282	53.3%
Asian American	1,323	873	65.9%
AI/AN	671	421	62.7%
Black	377	238	63.1%
NHPI	117	81	69.2%

Data Source: California Department of Public Health COVID-19 Vaccine Equity Metric

- Latino population report the lowest rates of COVID-19 vaccination in the county. Only 52.7% of eligible Latino or Hispanic residents have received a primary series of the COVID-19 vaccine. In 2019, 10% of the population of Nevada County was Hispanic, making this the largest race/ethnic minority in the county.

Social Vulnerability Index and COVID-19

Social vulnerability refers to the potential negative effects on communities caused by external stresses on human health. Such stresses include natural or human-caused disasters, or disease outbreaks. Reducing social vulnerability can decrease both human suffering and economic loss (CDC). Factors such as poverty, crowded and absence of housing, lack of access to transportation and racial and ethnic minority status can increase a community's vulnerability and the risk of negative health outcomes that can occur during disaster events, such as a public health emergency like COVID-19.

The CDC's Social Vulnerability Index (SVI) is a method that helps emergency response planners and public health identify and map communities that will most likely need support before, during, or after a hazardous situation such as disease outbreaks and natural disasters. The CDC calculates SVI by 15 variables from the American Community Survey (ACS) classified in four dimensions: (1) socioeconomic status; (2) household composition; (3) minority status and language; and (4) housing type and transportation. Possible scores range from 0 (low vulnerability) to 1 (high vulnerability).

Early studies during the COVID-19 pandemic showed counties with greater SVI scores were areas that were more likely to be hotspots and have rapidly increasing COVID-19 cases [6]. By understanding the relationship between county SVI scores and COVID-19, counties could better plan the public health response.

- Overall, Nevada County has a low social vulnerability index score of 0.2. This means 20% of the counties in the state are less vulnerable than Nevada County and that 80% of the counties are more vulnerable than Nevada County.

Nevada County COVID-19 Cases based on Social Vulnerability Index (SVI)

Despite an overall low score, SVI scores vary within the county. Certain census regions of the county, such as census block 6, south of Grass Valley, has a high SVI score of 0.88, meaning 88% of the census

regions across the state are less vulnerable than that region. Cumulative COVID-19 cases reported from January 2020 to July 2022 were largely clustered around Grass Valley and Truckee areas and closely aligned to the elevated SVI census tracts in those corresponding areas.
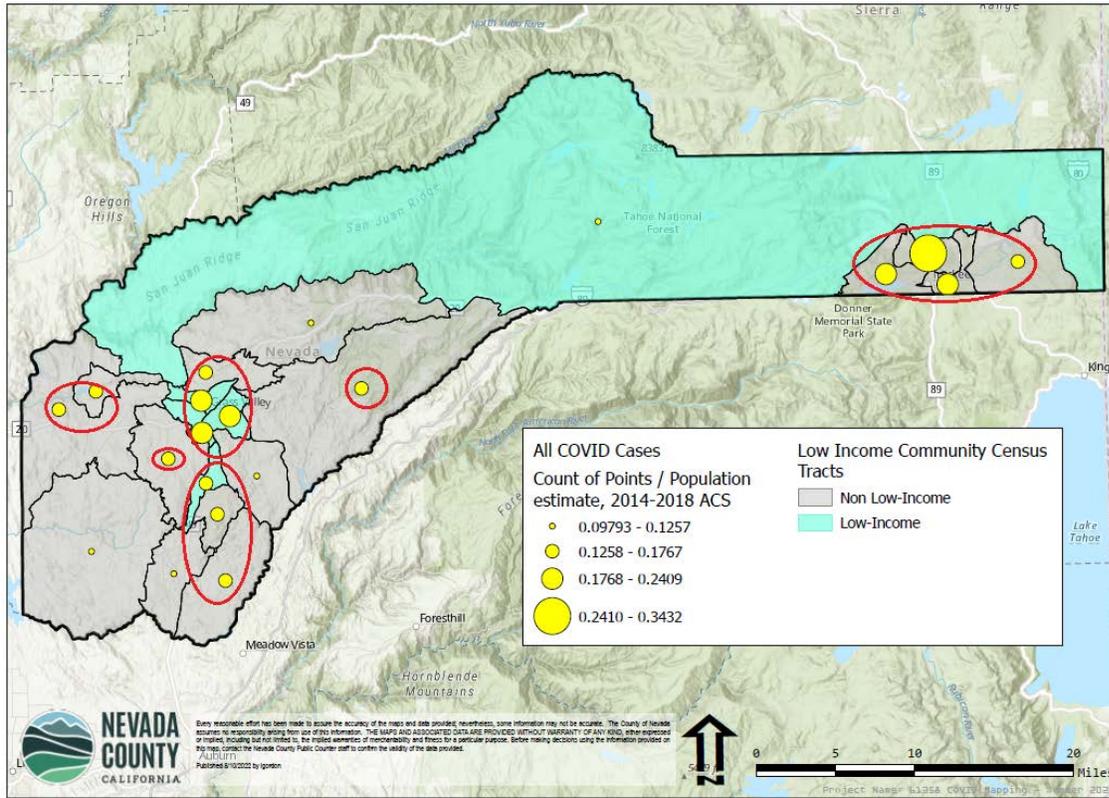
Nevada County Case Distribution by CDC Social Vulnerability Index (SVI)
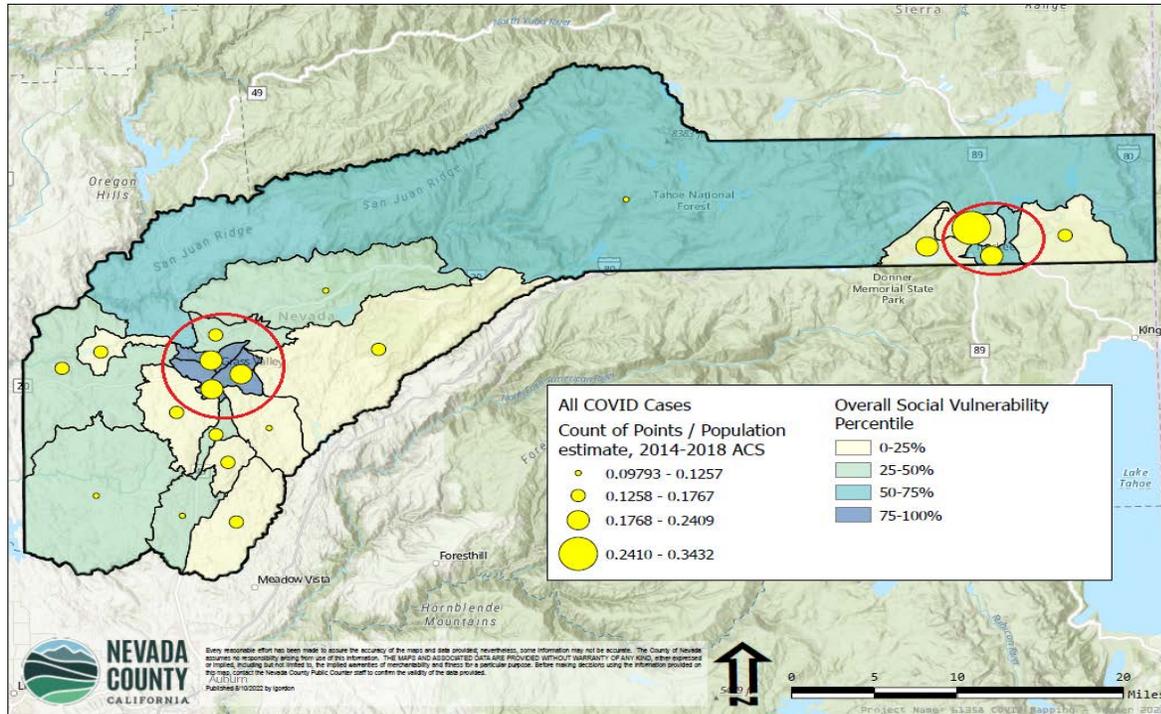

COVID-19 Case Distribution by Population Density and Income

The regions within Nevada County that had higher SVI also had a higher number of COVID-19 cases. Population density, for example, has had a considerable impact on disease transmissibility (Afshordi et al. 2020, Guha et al. 2020, Rajan et al. 2020) and is a reliable predictor of cumulative infection (Wong and Li 2020), despite mediating factors such as private transportation and median household income (Sy et al. 2021). Despite being in County's non-low-income tracts, number of COVID-19 cases were reported high in Truckee, Penn Valley, Nevada City and Alta Sierra. This is due to increased population density compared other parts of the county.

*Nevada County COVID Cases by Population Density and Income*

Nevada County COVID-19 Case Distribution in 2020 and 2021 by SVI
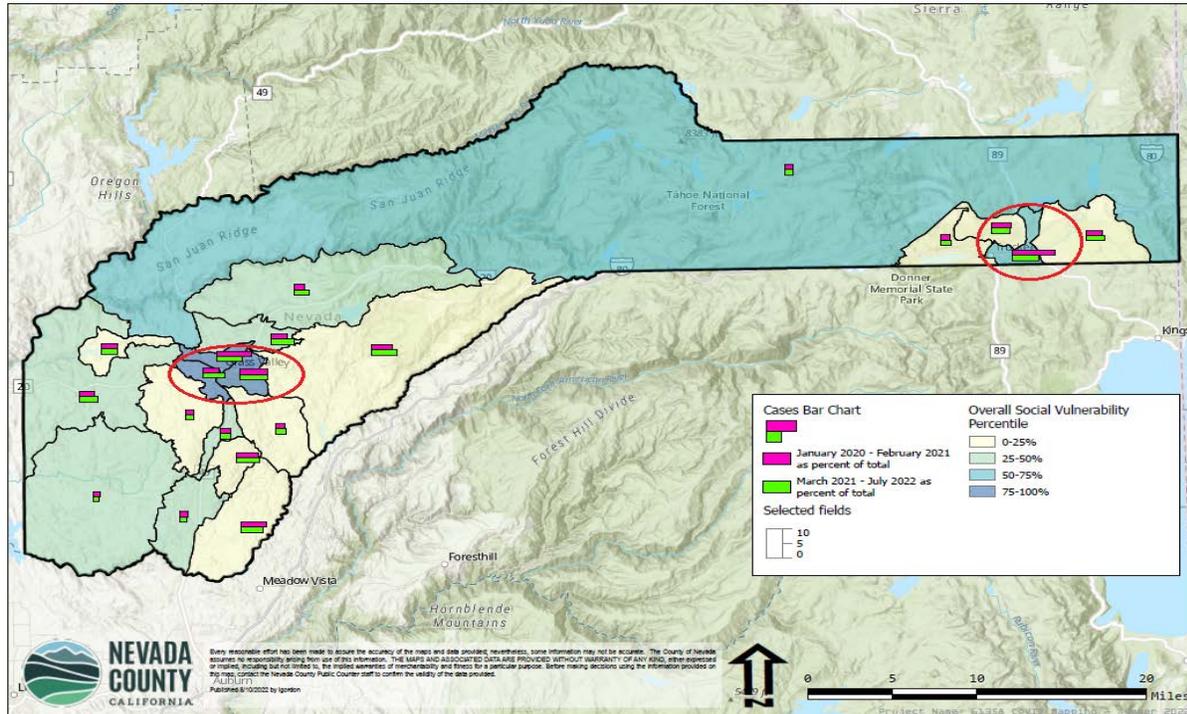
Nevada County COVID Cases by Minority Status and Language

There is evidence that racial and ethnic minority populations have been disproportionately affected by COVID-19 (Golestaneh et al. 2020, Tai et al. 2021). In the county, Latino, Black, and Pacific Islander were increasingly prone to greater COVID-19 spread when residing in a population-dense environment mostly in Truckee and Grass Valley.

*Nevada County COVID Case Distribution by Minority Status and Language*
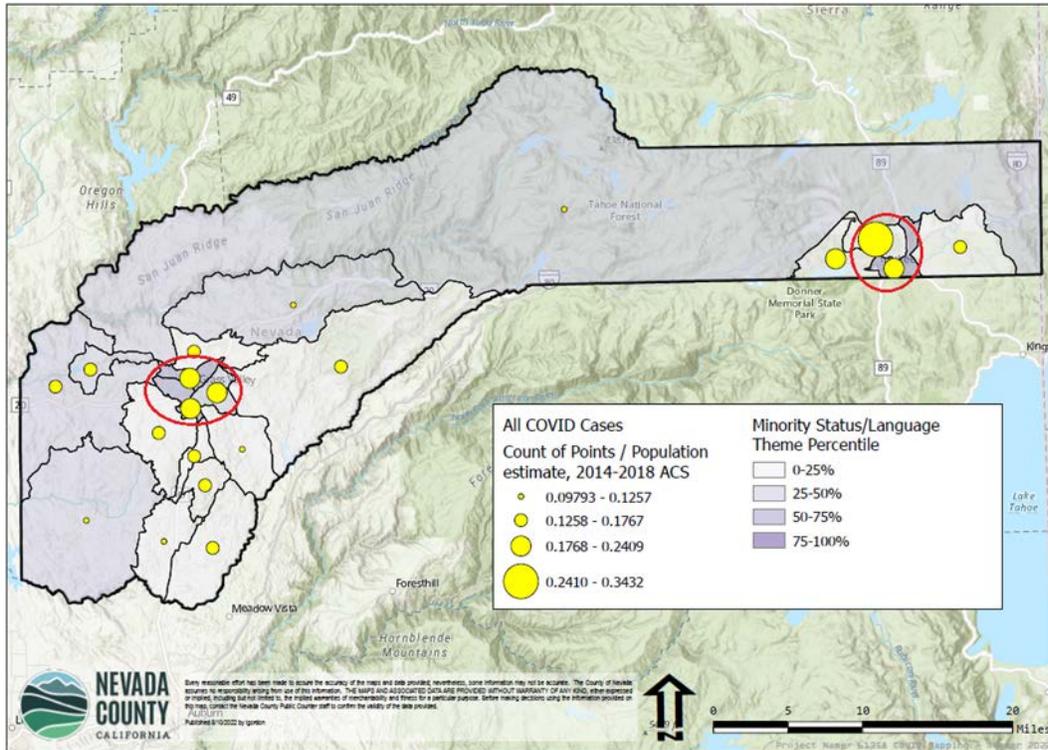
*Nevada County COVID Cases and Other Social Factors:*

Lower socioeconomic status leads to insufficient access to care and poorer health outcomes (Nayak et al. 2020). Greater socioeconomic vulnerability has recently been associated with increased COVID-19-related mortality as well as greater COVID-19 infection rates (Neelon et al. 2021). It is also linked to lower COVID-19 vaccination coverage, even as vaccine eligibility, supply, and availability expand (Barry et al. 2021).

In Nevada County, regardless of SVI, case counts were consistently higher in heavily populated areas. From 2020 and 2022, clusters of COVID hotspots were reported in the Western portions of the County (mainly Grass Valley) followed by eastern part (mainly Truckee).

Nevada County COVID Cases by Housing/Transportation
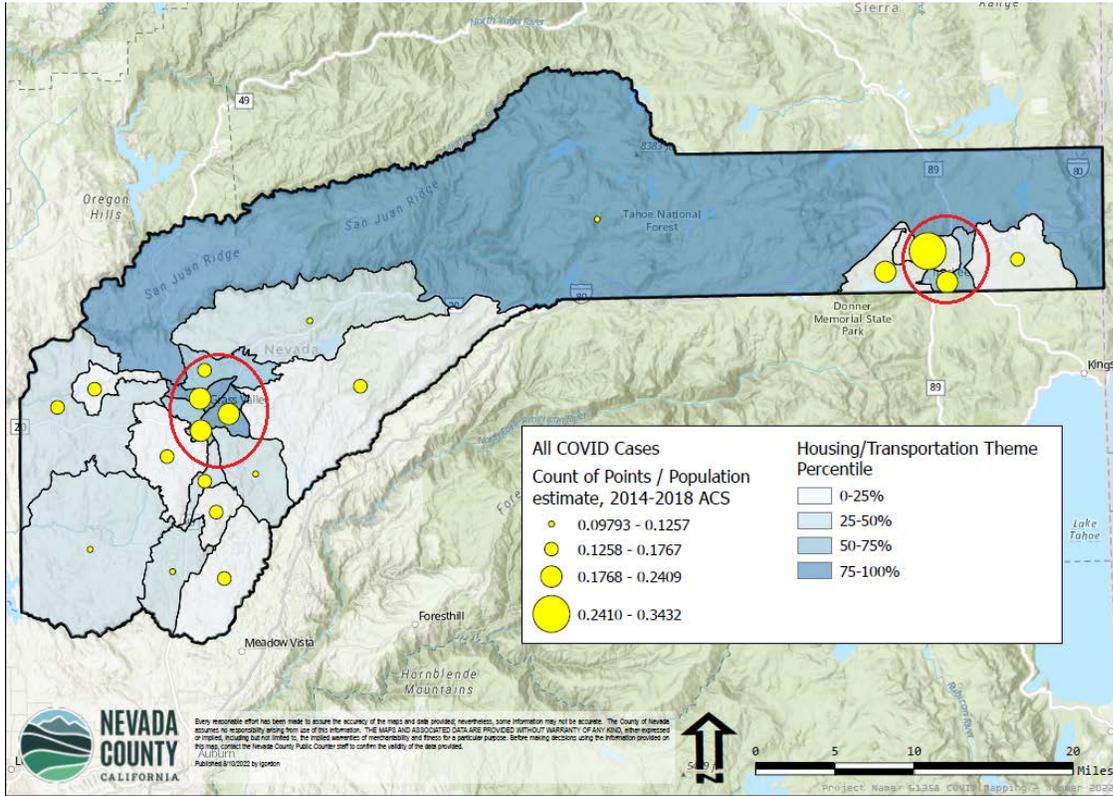
Nevada County COVID-19 Cases by Socio Economic Status
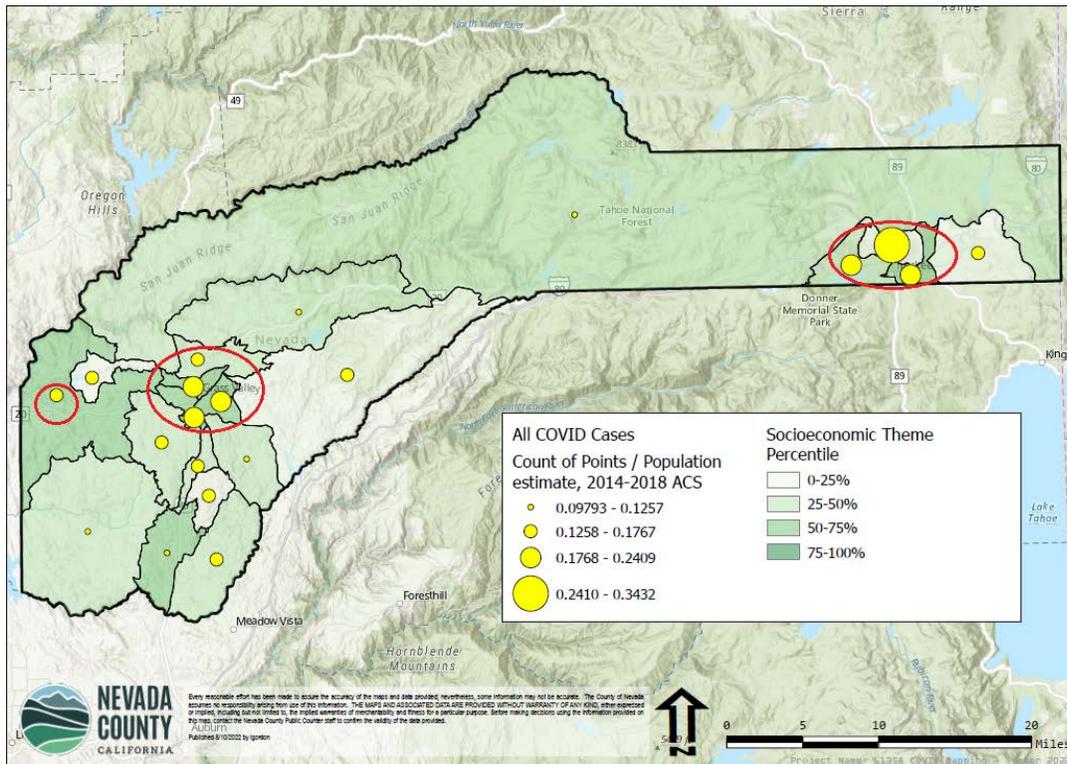
The highest percentage of cases (44.9%) were reported in Grass Valley which is densely populated and highly vulnerable in terms of all social factors i.e. socio-economic status (low income), housing and transportation (more mobile home, multiunit structures, crowding, group quarters and no vehicles), minority status (minority population density with limited English proficiency). Addressing the social factors that create poor health is essential to reducing inequities in the health impacts of disasters.

Rates of Vaccine Hesitancy

Vaccine hesitancy refers to the delay or refusal to get a vaccine despite vaccines being available. This is information that is collected through the U.S. Census Bureau's Household Pulse Survey (HPS). In Nevada County, COVID-19 vaccine hesitancy is low with only 7.3% of the population 'hesitant' or 'unsure' about receiving the vaccine. Throughout California, vaccine hesitancy rate changes from 6% to 9% with an average of 7.5% [10]. NCDPH explored reasons for vaccine hesitancy among Nevada County residents in the *Nevada County Resident Attitudes Toward COVID-19 Vaccination* through the FM3 survey. The survey was conducted from May 26th to June 3rd, 2021. The survey is available in Appendix C. Vaccine hesitancy data reported in this section were obtained from the Nevada County residents' survey responses.

Hesitancy by Age and Race/Ethnicity

- Residents between the ages of 18-29 were the most hesitant to receive the vaccine with 21% sharing they were 'unsure' if they would receive the COVID-19 vaccine. The second most hesitant age group were adults between 50-64 at 9%.

- Latino residents (14%) and all residents of color (14%) were more unsure about getting vaccinated compared to White residents. On the other hand, 22% of all residents of color and 21% of White residents were the most likely to say they will not get vaccinated.

Hesitancy by Age Group in Nevada County, (May 26th to June 3rd, 2021)
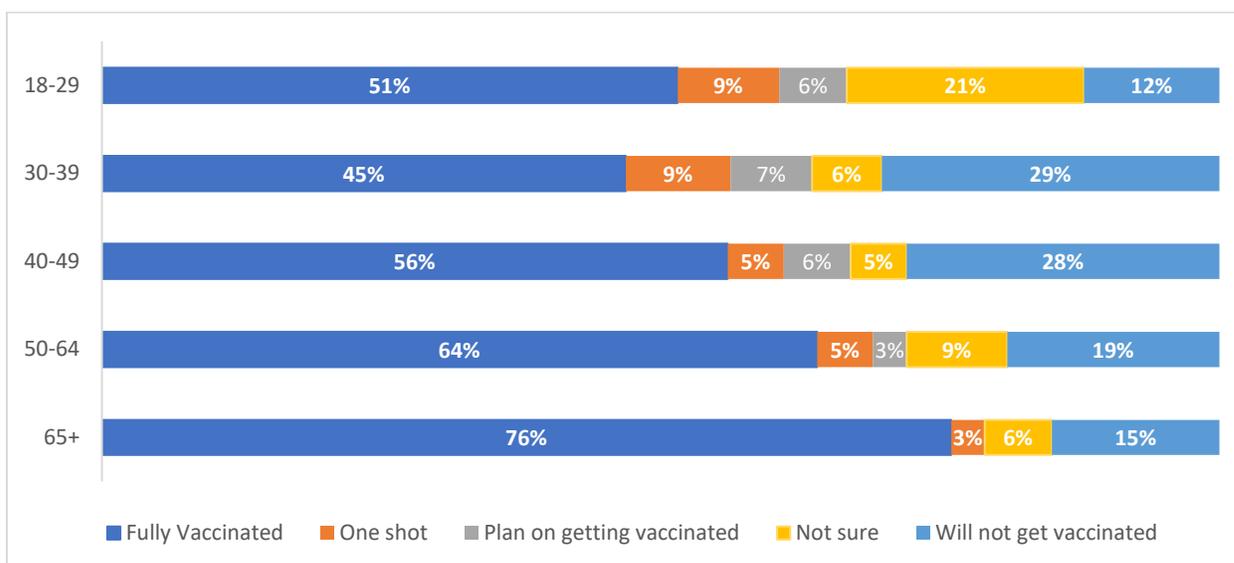
Data Source: Nevada County Resident Attitude Towards COVID-19 Vaccination-FM3 survey (Appendix C)

Hesitancy by Insurance Status

- In Nevada County, Medi-Cal recipients (30%) were more unsure about getting vaccinated than those with other forms of insurance. Only 5% of residents with private insurance reported being unsure about getting vaccinated.

- Uninsured residents had the lowest rates of vaccination in Nevada County with only 36% vaccinated and 62% reporting they will not get vaccinated. Residents with private insurance were the least likely to not get vaccinated at 15%.

Hesitancy by Income

- Hesitancy varied across income levels in Nevada County. Residents with an income between $30,000-$50,000 per year were the least likely to be vaccinated (53%) and were more likely to be unsure about getting vaccinated (14%) compared to any other income bracket. Residents with annual incomes of less than $30,000 had the second lowest rates of vaccination (60%) and uncertainty about whether they would get vaccinated (9%).

- Residents with income between $75,000-$100,000 were more likely to be vaccinated compared to any other income group.

Barriers and Motivators for Vaccination

Barriers to Vaccination

Among residents that were unsure or unwilling to get vaccinated, or those that know someone that feels this way, the most common reasons were: fear of side effects, particularly blood clots; concern that the vaccine was developed too quickly and lack of trust in pharmaceutical companies; resistance to the government telling them what to do; and belief that the pandemic has been exaggerated. The majority of those surveyed shared that inconvenient appointment times and places were not a barrier for them.

- Among residents that were more resistant to vaccination, most were concerned about safety (26%) or how new the vaccine was (36%). Others believed the vaccine was not needed and that the virus had a high survival rate (22%).

- Additionally, among Nevada County residents that were resistant to vaccination, one in ten already had the virus and did not believe the vaccine was needed.

- The majority surveyed believed that the vaccine would allow life to return to normal in their community (68%).

- Among parents of children under 11 years of age, nearly one in two (45%) wanted to vaccinate their children once vaccines for their age groups were approved.

- Among residents that were unsure about get vaccinated, 87% felt that nothing in their day to day would change once they got the vaccine compared to 51% of all residents.

- Nine out of ten of those who said they will not get a COVID-19 vaccine also skip their flu shot. These individuals were more likely to be younger, male and had lower income and less formal education than residents who do get their flu shot.

Motivators to Vaccination

Among Nevada County residents overall**,** free vaccines, the safety record of vaccine trials, and appeals to personal responsibility were key motivators to vaccination. On vaccine issues, residents were most likely to trust nurses, doctors, family, and friends. Among those that were vaccine hesitant, scientists, nurses, doctors, and seniors were trusted messengers. Residents were most suspicious and least trusting of COVID-19 vaccination information from faith leaders, local elected officials, and the CDC. This information can inform future COVID-19 outreach efforts.

- Personal doctors (57%) were trusted the most for sharing information or encouraging people to get COVID-19 vaccines followed by nurses (49%) and scientists (49%).

- Residents had high levels of suspicion and distrust of the CDC (41%), local county supervisor (36%), local faith leaders (34%), and the FDA (29%).

Impact of COVID-19 on Nevada County Residents

COVID-19 had economic, physical, social, mental, and emotional impacts on communities across the country. Respondents of the aforementioned survey in 2021 identified they knew someone that had COVID-19:

- 75% of residents surveyed had or knew someone who had COVID-19. Among those, 15% experienced COVID-19 themselves.

- Those most likely to have reported having COVID-19 included Spanish speakers, uninsured people, men under 50 years of age, and those insured through Medi-Cal.

Health Impacts of COVID-19

- 48% of the residents had someone in their household that was especially vulnerable to COVID-19 complications because of age or health conditions such as respiratory conditions, diabetes, high blood pressure, or were immunocompromised. This included the 20% of respondents that identified themselves at high risk for complications due to COVID-19.

- 41% of residents surveyed thought the health impacts of the COVID-19 pandemic were a very serious problem.

Economic Impacts of COVID-19 Pandemic Nevada County

Nevada County residents were presented with a list of issues the county was facing and asked to rate their severity.

- 70% of residents surveyed said the economic impacts of COVID-19 were a very serious problem, while just 40% said the same of COVID-19's health impacts.

- The cost of healthcare was perceived as a very serious problem for 62% of Nevada County residents.

- 50% of residents surveyed felt it was a very serious problem that there were too many limits on business operations during the pandemic.

Conclusion

As demonstrated and highlighted in this Community Health Assessment Addendum, Nevada County is a diverse county with multiple communities with a variety of needs. Highlighting a few social determinants of health, as well as COVID-19 response efforts, issues pertaining to overdoses permits NCPHD to briefly spotlight the critical work that has been done but shows that there still is much to do. Each community has its own qualities that make life here in our rural Sierra Nevada mountain communities great. Moving out of the COVID-19 pandemic and to a "new" normal way of life, we will continue to discover the benefits of healthy living and making strides to addressing the different needs that are presented to live better lives.

In 2023-2024 NCPHD will convene a steering committee to develop an updated Community Health Assessment, which will be integral for the 2223-2024 Community Health Improvement Plan aka the CHIP. This committee will meet regularly to tell the story of Nevada County and determine the structure how to implement a plan to address the needs identified in the 2023-2024 CHA. NCPHD looks forward to focusing efforts on the identified needs, but also making our communities a sustainable, healthy environment in which we live, play and grow.

Appendix A: Report Structure and Definitions

This section outlines the structure and defines key terms found in this report.

Report Structure

- This report highlights key indicators, or key measures, that are important in understanding the impact of COVID-19 on the health of the community. The report is organized by indicator with brief descriptions of the indicator and key findings in Nevada County.

- Bullet points highlight key findings within Nevada County including comparisons with state data, differences in data because of age, sex at birth, or race/ethnicity. Or geographic differences. Tables and graphs are used to visualize some of the results within each section.

- All data in this report is secondary. Data Sources are identified throughout the document, below figures and tables, and within the References and Data Sources section.

Data Notes

- Race/Ethnicity data is not shown when the sample size is low due to rates being considered unreliable and statistically insignificant. Nevada Public Health Department County follows California Department of Public Health guidelines and recommendations for small number analytics. In public reports and datasets this is referred to as data suppression, which is done to protect the identities, privacy, and personal information that could be inferred or revealed if the data were reported. This is also done to avoid making conclusions about entire sub-populations, without enough adequate data.

- The following symbols are used in graphs throughout the report (*, ^):

  > * There are too few cases to protect confidentiality and/or report reliable rates. Therefore, data are suppressed per the California Health and Human Services Agency data de-identification guidelines.

^ While rates are presented, there are too few cases to meet a precision standard, and results should be interpreted with caution.

Definitions

- Number of deaths and number of hospitalizations describes the absolute number of events. All other things being equal, the number of deaths or hospitalizations will be larger in areas with larger populations. This measure does not consider the age distribution or size of the population.

- **Age-adjusted rates** consider the age distribution of the population where the rate is being calculated. It is the rate that would have existed if the population had the same age distribution as a reference population. This allows for comparisons between populations with differences in age distributions. For example, if a ZIP Code within the county has a higher-than-average death rate, it is important to consider whether the higher death rate is due to an older population living within that ZIP Code.

- **Confidence interval,** usually referred to as the 95% confidence interval, is also known as the error bar. It is the range of values that includes the true value 95% of the time, accounting for possible errors in the data.

- **Crude rate** is the total number of events, such as births or deaths, divided by the number of people in the population (multiplied by 100,000). This gives the rate of the event per 100,000 which allows for comparisons across different population sizes.

- **Life expectancy**, usually referred to as "Life Expectancy at Birth," summarizes in one number the average period in years that one is expected to live. Its calculation is complex but is generally interpreted as the number of years people born in a particular year are "likely" to live.

- **Years of life lost** (YLL) emphasizes the impact of conditions that cause more deaths among younger people, so YLL is sometimes referred to as "premature deaths". The number of years of life lost for deaths at each age are determined here using the "Global Burden of Disease" methods from the World Health Organization. Years of Life Lost are expressed in this report as rates per 100,000 population.

- **Percent increase** measures the change in the death rate between two different years, and shows which conditions are increasing (or decreasing) most rapidly. This is measured by showing the percentage increase in the age-adjusted death rate. "Age-adjusted" death rates are used to account for the impact of the changing age distribution of the California population on the measure. Because this measure focuses on the degree of increase it may sometimes highlight a condition or group for which the absolute number of deaths is relatively small, but the percent increase is great.

- **Disparity ratio** measures the difference in the death rate between racial/ethnic groups for the same condition using combined data from a three-year period. The measure compares the age-

adjusted death rate in the group with the highest rate to the group with the lowest rate. A large ratio between the two rates indicates a large disparity.

- **Years lived with disability** is based on calculations and modeling done by the Institute for Health Metrics and Evaluation. These models utilize assumptions and multiple data sources to produce reliable California-specific estimates of years lived with disability. These are shown in this report as a rate per 100,000 population.

- The **Federal Poverty Level (FPL),** also known as the poverty line. It is an economic measure used by government agencies to determine if an individual or family's income is eligible for certain federal benefits and subsidies. It takes into account household size and household income to determine the level of poverty.

  - **High poverty:** 20% or more of the population in the neighborhood is below the FPL.
  - **Medium poverty**: 5% to 19% of the population is below the FPL.
  - **Low poverty**: fewer than 5% of the population is below the FPL.

Appendix B: References and Data Sources

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