



# SUTTER SURGICAL HOSPITAL NORTH VALLEY

2022 Community Health Needs Assessment

## **Mission**

We enhance the well-being of people in the communities we serve through a not-for-profit commitment to compassion and excellence in healthcare services.

## **Vision**

Sutter Health leads the transformation of healthcare to achieve the highest levels of quality, access, and affordability.

## **Community Health Needs Assessment**

The following report contains Sutter Surgical Hospital North Valley's 2019 Community Health Needs Assessment (CHNA), which is used to identify and prioritize the significant health needs of the communities we serve. CHNAs are conducted once every three years, in collaboration with other healthcare providers, public health departments and a variety of community organizations. This CHNA report guides our strategic investments in community health programs and partnerships that extend Sutter Health's not-for-profit mission beyond the walls of our hospitals, improving health and quality of life in the areas we serve.

# **2022 Community Health Needs Assessment**

Conducted on behalf of

**Adventist Health and Rideout  
726 4<sup>th</sup> Street  
Marysville, California 95901**

and

**Sutter Surgical Hospital North Valley  
455 Plumas Boulevard  
Yuba City, California 95991**

Conducted by



May 2022

## Acknowledgments

We are deeply grateful to all those who contributed to the community health needs assessment conducted on behalf of Adventist Health and Rideout, and Sutter Surgical Hospital North Valley. Many dedicated community health experts and members of various social service organizations serving the most vulnerable members of the community gave their time and expertise as key informants to help guide and inform the findings of the assessment. Many community residents also participated and volunteered their time to tell us what it is like to live in the community and shared the challenges they face trying to achieve better health. To everyone who supported this important work, we extend our heartfelt gratitude.

Community Health Insights ([www.communityhealthinsights.com](http://www.communityhealthinsights.com)) conducted the assessment on behalf of Adventist Health and Rideout, and Sutter Surgical Hospital North Valley. Community Health Insights is a Sacramento-based research-oriented consulting firm dedicated to improving the health and well-being of communities across Central and Northern California. This joint report was authored by:

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# Report Summary

## Purpose

The purpose of this community health needs assessment (CHNA) was to identify and prioritize significant health needs of the community served by Adventist Health and Rideout (AHRO) and Sutter Surgical Hospital North Valley (SSHNV). The priorities identified in this report help to guide nonprofit hospitals' community health improvement programs and community benefit activities as well as their collaborative efforts with other organizations that share a mission to improve health. This CHNA report meets the requirements of the Patient Protection and Affordable Care Act (and in California, Senate Bill 697) that nonprofit hospitals conduct a community health needs assessment at least once every three years. The CHNA was conducted by Community Health Insights ([www.communityhealthinsights.com](http://www.communityhealthinsights.com)).

## Community Definition

The definition of the community served was the primary service area jointly shared by AHRO and SSHNV. This area was defined by five ZIP Codes: 95901, 95953, 95961, 95991, and 95993. This service area was designated because the majority of patients served by both AHRO and SSHNV resided in these ZIP Codes. AHRO is located in Marysville, California, and SSHNV is located in Yuba City, California. Separated by the Feather River, these cities are located adjacent to one another and are part of the Yuba City Metropolitan Statistical Area as designated by the US Office of Management and Budget.<sup>1</sup> The service area is home to over 150,000 community residents and encompasses portions of both Sutter and Yuba Counties. The rural community is rich in diversity along a number of dimensions.

## 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.<sup>2</sup> This model of population health includes many factors that impact and account for individual health and well-being. Furthermore, 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 (qualitative) and secondary (quantitative) data. Qualitative data included one-on-one and group interviews with 28 community health experts, social service providers, and medical personnel. Furthermore, 10 community residents or community service provider organizations participated in three focus groups across the service area. Finally, 16 community service providers responded to a Community Service Provider (CSP) survey asking about health need identification and prioritization.

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

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<sup>1</sup> See: <https://www.labormarketinfo.edd.ca.gov/definitions/metropolitan-areas.html>

<sup>2</sup> Robert Wood Johnson Foundation, and University of Wisconsin, 2021. County Health Rankings Model. Retrieved 31 Jan 2022 from <http://www.countyhealthrankings.org/>.



At the time that this CHNA was conducted, the COVID-19 pandemic was still impacting communities across the United States, including the hospitals' service area. The process for conducting the CHNA remained fundamentally the same. However, there were some adjustments made during the qualitative data collection to ensure the health and safety of those participating. Additionally, COVID-19 data were incorporated into the quantitative data analysis and the impact of COVID-19 on health needs was a focus of qualitative data collection. These findings are reported throughout various sections of the report.

## **Process and Criteria to Identify and Prioritize Significant Health Needs**

Primary and secondary data were analyzed to identify and prioritize significant health needs. This began by identifying 12 potential health needs (PHNs). These PHNs were identified in previously conducted CHNAs. Data were analyzed to discover which, if any, of the PHNs were present in the service area. Those PHNs that met a threshold of inclusion were selected as significant health needs. These significant health needs were prioritized based on rankings provided by primary data sources. Data were also analyzed to detect emerging health needs beyond those 12 PHNs identified in previous CHNAs. For this CHNA, no emergent health needs were identified.

## **List of Prioritized Significant Health Needs**

The following significant health needs were identified for the AHRO and SSHNV service area, and are listed below in prioritized order.

1. Access to Mental/Behavioral Health and Substance Use Services
2. Access to Basic Needs Such as Housing, Jobs, and Food
3. Active Living and Healthy Eating
4. Access to Specialty and Extended Care
5. Access to Quality Primary Care Health Services
6. Access to Functional Needs
7. Injury and Disease Prevention and Management
8. Increased Community Connections
9. Safe and Violence-Free Environment

## **Resources Potentially Available to Meet the Significant Health Needs**

In all, 227 resources were identified in the service area that were potentially available to meet the significant health needs. The resource identification method started with verifying all resources from the 2019 CHNA report, while also searching for new. Resources that no longer existed were removed from the list, while newly identified resources were added.

## **Conclusion**

This CHNA details the process and findings of a comprehensive health assessment to guide decision-making for the implementation of community health improvement efforts using a health equity lens. The CHNA includes an overall health and social examination of the service area and highlights the needs of community members living in communities where residents experience health disparities. This report also serves as a resource for community organizations in their effort to improve health and well-being in the communities they serve.

## Introduction and Purpose

Both state and federal laws require that nonprofit hospitals conduct a community health needs assessment (CHNA) every three years to identify and prioritize the significant health needs of the communities they serve. The results of the CHNA guide the development of implementation plans aimed at addressing identified health needs. Federal regulations define a health need accordingly: “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).<sup>3</sup>

This report documents the processes, methods, and findings of a CHNA conducted on behalf of Adventist Health and Rideout (AHRO), located at 726 4<sup>th</sup> Street, Marysville, California 95901, and Sutter Surgical Hospital North Valley (SSHNV) located at 455 Plumas Boulevard, Yuba City, California 95991. These hospitals’ primary service area includes the communities of the Yuba-Sutter area or the Yuba City Metropolitan Statistical Area which covers both Sutter and Yuba Counties. At the time of this assessment the total population of the service area was 150,807.

AHRO is an affiliate of Adventist Health, a nonprofit healthcare system. SSHNV is an affiliate of Sutter Health, also a nonprofit healthcare system. The CHNA was conducted over a period of five months, beginning December 2021 and concluding April 2022. This CHNA report meets requirements of the Patient Protection and Affordable Care Act and California Senate Bill 697 that nonprofit hospitals conduct a community health needs assessment at least once every three years.

Community Health Insights ([www.communityhealthinsights.com](http://www.communityhealthinsights.com)) conducted the CHNA. Community Health Insights is a Sacramento-based research-oriented consulting firm dedicated to improving the health and well-being of communities across Central and Northern California. Community Health Insights has conducted dozens of CHNAs and CHAs for multiple health systems and local health departments over the previous decade.

## Findings

### Prioritized Significant Health Needs

Primary and secondary data were analyzed to identify and prioritize the significant health needs in the service area. In all, nine significant health needs were identified. Primary data were then used to prioritize these significant health needs.

Prioritization was based on three measures of community input. The first two measures came from the key informant interview and focus group results. These included the percentage of sources that identified a health need as existing in the community, and the percentage of times the sources identified a health need as a top priority. The last measure was the percentage of community provider survey

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<sup>3</sup> Federal Register, Vol. 79, No. 250, (Wednesday, December 31, 2014). Department of the Treasury, Internal Revenue Service.

respondents that identified a health need as a top priority. Table 1 shows the value of these measures for each significant health need.

*Table 1: Health need prioritization inputs for the AHRO/SSHNV service area.*

Prioritized Health Needs	Percentage of Key Informants and Focus Groups Identifying Health Need	Percentage of Times Key Informants and Focus Groups Identified Health Need as a Top Priority	Percentage of Provider Survey Respondents that Identified Health Need as a Top Priority
Access to Mental/Behavioral Health and Substance Use Services	92%	32%	69%
Access to Basic Needs such as Housing, Jobs, and Food	100%	17%	44%
Active Living and Healthy Eating	77%	10%	38%
Access to Specialty and Extended Care	85%	9%	19%
Access to Quality Primary Care Health Services	92%	8%	6%
Access to Functional Needs	85%	2%	19%
Injury and Disease Prevention and Management	69%	8%	6%
Increased Community Connections	62%	2%	12%
Safe and Violence-Free Environment	62%	3%	6%

These measures were then combined to create a health need prioritization index. The highest priority was given to health needs that were more frequently mentioned and were more frequently identified among the top priority needs.<sup>4</sup> The prioritization index values are shown in Figure 1, where health needs are ordered from highest priority at the top of the figure to lowest priority at the bottom.

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<sup>4</sup> Further details regarding the creation of the prioritization index can be found in the technical section of this report.

## Sutter and Yuba County 2022 Prioritized Health Needs

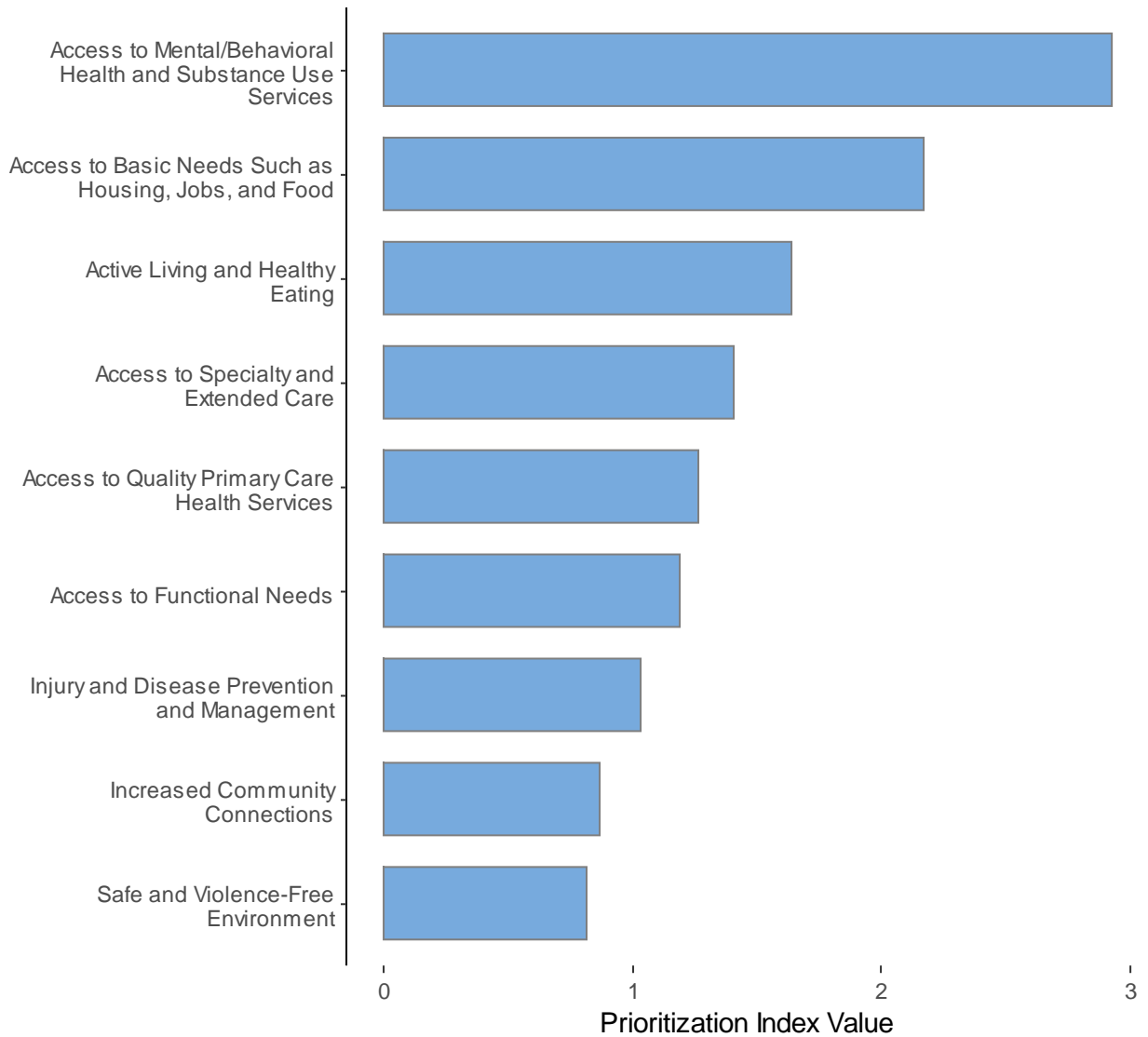


Figure 1: Prioritized significant health needs for AHRO/SSHNV service area.

While COVID-19 was top of mind for many participating in the primary data collection process, feedback regarding the impact of COVID-19 confirmed that the pandemic exacerbated existing needs in the community.

The significant health needs are described below. Those secondary data indicators used in the CHNA that performed poorly compared to benchmarks are listed in the table below each significant health need ordered by their relationship to the conceptual model used to guide data collection for this report. Results from primary data analysis are also provided in the table. (A full listing of all quantitative indicators can be found in the technical section of this report).

**1. Access to Mental/Behavioral Health and Substance Use 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 occur. Access to mental, behavioral, and substance use services is an essential ingredient for a healthy community where residents can obtain additional support when needed.

Primary Data Analysis	Secondary Data Analysis
<p>The manner in which the health need was expressed in the community was described as follows by key informants, focus group participants, and survey respondents:</p>	<p>The following indicators performed worse in the service area when compared to state averages:</p>
<ul style="list-style-type: none"> <li>• The mental health system lacks capacity to meet the community's needs (lacks providers, treatment and detox centers, support groups, rehabilitation services, etc., especially for youth, homeless, and the undocumented).</li> <li>• Navigating the mental/behavioral health system is a barrier for many seeking services.</li> <li>• Treatment options for those that are uninsured and underinsured are limited.</li> <li>• Substance use, including methamphetamines, opioids, and tobacco/nicotine delivery products, is an issue in the community.</li> <li>• There is a stigma in seeking mental health services, and this a barrier for many needing care.</li> <li>• The community needs to focus on prevention as well as treatment for mental health needs.</li> <li>• The community lacks culturally competent mental health services.</li> </ul>	<ul style="list-style-type: none"> <li>• Life Expectancy</li> <li>• Premature Age-Adjusted Mortality</li> <li>• Premature Death</li> <li>• Liver Disease Mortality</li> <li>• Suicide Mortality</li> <li>• Poor Mental Health Days</li> <li>• Frequent Mental Distress</li> <li>• Poor Physical Health Days</li> <li>• Frequent Physical Distress</li> <li>• Poor or Fair Health</li> <li>• Excessive Drinking</li> <li>• Drug Induced Death</li> <li>• Adult Smoking</li> <li>• Primary Care Shortage Area</li> <li>• Mental Health Care Shortage Area</li> <li>• Medically Underserved Area</li> <li>• Mental Health Providers</li> <li>• Psychiatry Providers</li> <li>• Firearm Fatalities Rate</li> <li>• Juvenile Arrest Rate</li> <li>• Disconnected Youth</li> <li>• Social Associations</li> <li>• Homelessness Rate</li> </ul>

**2. 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<sup>5</sup> suggests 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. Research shows that the social

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<sup>5</sup> McLeod, S. 2020. Maslow’s Hierarchy of Needs. Retrieved 31 Jan 2022 from <http://www.simplypsychology.org/maslow.html>.

determinants of health, such as quality housing, adequate employment and income, food security, education, and social support systems, influence individual health as much as health behaviors and access to clinical care.<sup>6</sup>

Primary Data Analysis	Secondary Data Analysis	
<p>The manner in which the health need appeared or was expressed in the community was described as follows by key informants, focus group participants, and survey respondents:</p>	<p>The following indicators performed worse in the service area when compared to state averages:</p>	
<ul style="list-style-type: none"> <li>• Lack of affordable housing is a significant issue in the area; the community needs more resources for those seeking affordable housing.</li> <li>• Many residents struggle with food insecurity; many are forced to choose between paying rent and meeting other basic needs.</li> <li>• The community needs better paying jobs; more vocational education programs are needed.</li> <li>• Poverty, including generational poverty, is an issue in the community; the community needs to seek policy solutions to poverty.</li> <li>• The number of residents experiencing homelessness is on the rise, and many need mental health and other services.</li> <li>• Many in the immigrant community are afraid to seek out social services to help meet their basic needs.</li> </ul>	<ul style="list-style-type: none"> <li>• Infant Mortality</li> <li>• Child Mortality</li> <li>• Life Expectancy</li> <li>• Premature Age-Adjusted Mortality</li> <li>• Premature Death</li> <li>• Hypertension Mortality</li> <li>• COVID-19 Mortality</li> <li>• COVID-19 Case Fatality</li> <li>• Diabetes Prevalence</li> <li>• Poor Mental Health Days</li> <li>• Frequent Mental Distress</li> <li>• Poor Physical Health Days</li> <li>• Frequent Physical Distress</li> <li>• Poor or Fair Health</li> <li>• Asthma ED Rates</li> <li>• Drug Induced Death</li> <li>• Adult Obesity</li> <li>• Limited Access to Healthy Foods</li> <li>• Food Environment Index</li> <li>• Medically Underserved Area</li> <li>• COVID-19 Cumulative Full Vaccination Rate</li> </ul>	<ul style="list-style-type: none"> <li>• Some College</li> <li>• High School Completion</li> <li>• Disconnected Youth</li> <li>• Third Grade Reading Level</li> <li>• Third Grade Math Level</li> <li>• Unemployment</li> <li>• Children in Single-Parent Households</li> <li>• Social Associations</li> <li>• Children Eligible for Free Lunch</li> <li>• Children in Poverty</li> <li>• Median Household Income</li> <li>• Uninsured Population under 64</li> <li>• Homelessness Rate</li> <li>• Long Commute - Driving Alone</li> </ul>

### 3. Active Living and Healthy Eating

Physical activity and eating a healthy diet are 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

<sup>6</sup> Robert Wood Johnson Foundation, and University of Wisconsin, 2022. Research Articles. Retrieved 31 Jan 2022 from <http://www.countyhealthrankings.org/learn-others/research-articles#Rankingsrationale>.

unhealthy foods that are convenient, affordable, and readily available. Communities experiencing social vulnerability and poor health outcomes often live in areas with fast food and other establishments where unhealthy food is sold. Under-resourced communities may be challenged with food insecurity, absent the means to consistently secure food for themselves or their families, hence relying on food pantries and school meals that often lack in sufficient nutrition for maintaining health.

Primary Data Analysis	Secondary Data Analysis
<p>The manner in which the health need appeared or was expressed in the community was described as follows by key informants, focus group participants, and survey respondents:</p>	<p>The following indicators performed worse in the service area when compared to state averages:</p>
<ul style="list-style-type: none"> <li>• There are food deserts in the community where fresh, unprocessed foods are not available; healthier foods are more expensive and unaffordable for many.</li> <li>• The community needs more nutrition education programs.</li> <li>• Students need healthier food options in schools.</li> <li>• Obesity is a growing problem throughout the community.</li> <li>• The built environment doesn't support physical activity (e.g., neighborhoods aren't walk-able, roads aren't bike-friendly, parks are inaccessible).</li> <li>• There aren't enough recreational opportunities in the area (e.g., organized activities, youth sports leagues).</li> <li>• Recreational opportunities in the area are unaffordable (e.g., gym memberships, recreational activity programming).</li> <li>• Homelessness in parks or other public spaces deters their use.</li> </ul>	<ul style="list-style-type: none"> <li>• Life Expectancy</li> <li>• Premature Age-Adjusted Mortality</li> <li>• Premature Death</li> <li>• Stroke Mortality</li> <li>• Heart Disease Mortality</li> <li>• Hypertension Mortality</li> <li>• Cancer Mortality</li> <li>• Kidney Disease Mortality</li> <li>• Diabetes Prevalence</li> <li>• Poor Mental Health Days</li> <li>• Frequent Mental Distress</li> <li>• Poor Physical Health Days</li> <li>• Frequent Physical Distress</li> <li>• Poor or Fair Health</li> <li>• Colorectal Cancer Prevalence</li> <li>• Asthma ED Rates</li> <li>• Adult Obesity</li> <li>• Physical Inactivity</li> <li>• Limited Access to Healthy Foods</li> <li>• Food Environment Index</li> <li>• Access to Exercise Opportunities</li> <li>• Homelessness Rate</li> <li>• Long Commute - Driving Alone</li> <li>• Access to Public Transit</li> </ul>

#### **4. Access to Specialty and Extended Care**

Extended care services, which include specialty care, are those provided in a particular branch of medicine and focused 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 the progression of chronic diseases, including diabetes and high blood pressure, on their own. In addition to specialty care, extended care refers to care extending beyond primary care services that is needed in the community to support overall physical health and wellness, such as skilled-nursing facilities, hospice care, and in-home healthcare.

Primary Data Analysis	Secondary Data Analysis	
<p>The manner in which the health need appeared or was expressed in the community was described as follows by key informants, focus group participants, and survey respondents:</p>	<p>The following indicators performed worse in the service area when compared to state averages:</p>	
<ul style="list-style-type: none"> <li>• There are not enough specialists serving the community; wait-times for appointments are excessive, and recruiting and retaining specialists in the community is a challenge.</li> <li>• Many have to travel out of the area to see specialists.</li> <li>• Too few specialists accept Medi-Cal.</li> <li>• Not all specialty care is covered by insurance; out-of-pocket costs for specialists is too high.</li> <li>• More services are needed for the elderly, including hospice and palliative care, assisted living facilities, skilled-nursing homes, and in-home care.</li> <li>• The community lacks OB/GYN care.</li> <li>• Vision care services are lacking in the community.</li> </ul>	<ul style="list-style-type: none"> <li>• Infant Mortality</li> <li>• Life Expectancy</li> <li>• Premature Age-Adjusted Mortality</li> <li>• Premature Death</li> <li>• Stroke Mortality</li> <li>• Chronic Lower Respiratory Disease Mortality</li> <li>• Heart Disease Mortality</li> <li>• Hypertension Mortality</li> <li>• Cancer Mortality</li> <li>• Liver Disease Mortality</li> <li>• Kidney Disease Mortality</li> <li>• COVID-19 Mortality</li> <li>• COVID-19 Case Fatality</li> <li>• Alzheimer's Disease Mortality</li> </ul>	<ul style="list-style-type: none"> <li>• Diabetes Prevalence</li> <li>• Poor Mental Health Days</li> <li>• Frequent Mental Distress</li> <li>• Poor Physical Health Days</li> <li>• Frequent Physical Distress</li> <li>• Poor or Fair Health</li> <li>• Lung Cancer Prevalence</li> <li>• Asthma ED Rates</li> <li>• Drug Induced Death</li> <li>• Psychiatry Providers</li> <li>• Specialty Care Providers</li> <li>• Preventable Hospitalization</li> <li>• Homelessness Rate</li> </ul>

### 5. 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 other similar resources. 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.

Primary Data Analysis	Secondary Data Analysis	
<p>The manner in which the health need appeared or was expressed in the community was described as follows by key informants, focus group participants, and survey respondents:</p>	<p>The following indicators performed worse in the service area when compared to state averages:</p>	
<ul style="list-style-type: none"> <li>• There aren't enough primary care service providers in the area; wait times for appointments can be excessive; it is difficult to recruit and retain providers in the community.</li> </ul>	<ul style="list-style-type: none"> <li>• Infant Mortality</li> <li>• Child Mortality</li> <li>• Life Expectancy</li> <li>• Premature Age-Adjusted Mortality</li> <li>• Premature Death</li> </ul>	<ul style="list-style-type: none"> <li>• Frequent Mental Distress</li> <li>• Poor Physical Health Days</li> <li>• Frequent Physical Distress</li> </ul>



<ul style="list-style-type: none"> <li>• The community needs more culturally competent providers serving non-English speaking residents.</li> <li>• There are too few providers that serve the under and uninsured in the community.</li> <li>• The cost of medications creates a barrier for many in the community.</li> <li>• Navigating the healthcare system is difficult, creating obstacles for those seeking care.</li> <li>• The community only has one hospital, making access more difficult.</li> <li>• Telehealth services should continue to expand, and this can increase access to care for many.</li> <li>• Patients have difficulty obtaining appointments outside of regular business hours.</li> </ul>	<ul style="list-style-type: none"> <li>• Stroke Mortality</li> <li>• Chronic Lower Respiratory Disease Mortality</li> <li>• Heart Disease Mortality</li> <li>• Hypertension Mortality</li> <li>• Cancer Mortality</li> <li>• Liver Disease Mortality</li> <li>• Kidney Disease Mortality</li> <li>• COVID-19 Mortality</li> <li>• COVID-19 Case Fatality</li> <li>• Alzheimer's Disease Mortality</li> <li>• Influenza and Pneumonia Mortality</li> <li>• Diabetes Prevalence</li> <li>• Poor Mental Health Days</li> <li>• Poor or Fair Health</li> <li>• Colorectal Cancer Prevalence</li> <li>• Lung Cancer Prevalence</li> <li>• Asthma ED Rates</li> <li>• Primary Care Shortage Area</li> <li>• Medically Underserved Area</li> <li>• Mammography Screening</li> <li>• Primary Care Providers</li> <li>• Preventable Hospitalization</li> <li>• COVID-19 Cumulative Full Vaccination Rate</li> <li>• Uninsured Population under 64</li> <li>• Homelessness Rate</li> </ul>
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### 6. Access to Functional Needs

Functional needs are those related to adequate transportation access and conditions which promote access for individuals with physical disabilities. 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 needs that promote and support a healthy life. The number of people with a disability is also an important indicator for community health and must be examined to ensure that all community members have access to necessities for a high quality of life.

Primary Data Analysis	Secondary Data Analysis
<p>The manner in which the health need appeared or was expressed in the community was described as follows by key informants, focus group participants, and survey respondents:</p>	<p>The following indicators performed worse in the service area when compared to state averages:</p>
<ul style="list-style-type: none"> <li>• Many residents do not have reliable personal transportation; more options are needed for those without a car.</li> <li>• Medical and public transportation service routes and schedules are limited; the cost is too high.</li> <li>• Public transportation is difficult for non-English speakers, seniors, and parents with young children.</li> </ul>	<ul style="list-style-type: none"> <li>• Disability</li> <li>• Frequent Mental Distress</li> <li>• Frequent Physical Distress</li> <li>• Poor or Fair Health</li> <li>• Adult Obesity</li> <li>• COVID-19 Cumulative Full Vaccination Rate</li> <li>• Homelessness Rate</li> <li>• Long Commute - Driving Alone</li> <li>• Access to Public Transit</li> </ul>

<ul style="list-style-type: none"> <li>• The distance between service providers is inconvenient for those using public transportation; and especially for those that have to leave the area to get healthcare.</li> <li>• The area needs more taxi and ride-share options (e.g., Uber, Lyft).</li> <li>• As telehealth grows in popularity, many in the community lack the technology infrastructure to access these services.</li> <li>• Many seniors lack the skills and technology needed to access telehealth services.</li> </ul>	
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### **7. Injury and Disease Prevention and Management**

Knowledge is important for individual health and well-being, and efforts aimed at injury and disease 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 focus on reducing cases of injury and infectious disease control (e.g., sexually transmitted infection (STI) prevention and influenza shots), and intensive strategies in the management of chronic diseases (e.g., diabetes, hypertension, obesity, and heart disease) are important for community health improvement.

<b>Primary Data Analysis</b>	<b>Secondary Data Analysis</b>
<p>The manner in which the health need appeared or was expressed in the community was described as follows by key informants, focus group participants, and survey respondents:</p> <ul style="list-style-type: none"> <li>• More health education programs are needed in the community.</li> <li>• The community needs to focus more on preventing, rather than treating, health conditions such as chronic diseases.</li> <li>• More upstream investment focused on prevention is needed.</li> <li>• Childhood development programs are needed in the community.</li> <li>• Prevention and education programs are needed for those experiencing homelessness.</li> <li>• Many of the preventative programs were discontinued during the pandemic, and these should be resumed.</li> </ul>	<p>The following indicators performed worse in the service area when compared to state averages:</p> <ul style="list-style-type: none"> <li>• Infant Mortality</li> <li>• Child Mortality</li> <li>• Stroke Mortality</li> <li>• Chronic Lower Respiratory Disease Mortality</li> <li>• Heart Disease Mortality</li> <li>• Hypertension Mortality</li> <li>• Liver Disease Mortality</li> <li>• Kidney Disease Mortality</li> <li>• Suicide Mortality</li> <li>• Unintentional Injuries Mortality</li> <li>• COVID-19 Mortality</li> <li>• COVID-19 Case Fatality</li> <li>• Alzheimer's Disease Mortality</li> <li>• Frequent Physical Distress</li> <li>• Poor or Fair Health</li> <li>• Asthma ED Rates</li> <li>• Excessive Drinking</li> <li>• Drug Induced Death</li> <li>• Adult Obesity</li> <li>• Physical Inactivity</li> <li>• Teen Birth Rate</li> <li>• Adult Smoking</li> <li>• COVID-19 Cumulative Full Vaccination Rate</li> <li>• Firearm Fatalities Rate</li> <li>• Juvenile Arrest Rate</li> <li>• Motor Vehicle Crash Death</li> <li>• Disconnected Youth</li> </ul>

	<ul style="list-style-type: none"> <li>• Diabetes Prevalence</li> <li>• Poor Mental Health Days</li> <li>• Frequent Mental Distress</li> </ul>	<ul style="list-style-type: none"> <li>• Third Grade Reading Level</li> <li>• Third Grade Math Level</li> <li>• Homelessness Rate</li> </ul>
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### 8. Increased Community Connections

As humans are social beings, community connection is a crucial part of living a healthy life. People have a need to feel connected with a larger support network and the comfort of knowing they are accepted and loved. Research suggests “individuals who feel a sense of security, belonging, and trust in their community have better health. People who don’t feel connected are less inclined to act in healthy ways or work with others to promote well-being for all.”<sup>7</sup> Assuring that community members have ways to connect with each other through programs, services, and opportunities is important in fostering a healthy community. Further, healthcare and community support services are more effective when they are delivered in a coordinated fashion, where individual organizations collaborate with others to build a network of care.

Primary Data Analysis	Secondary Data Analysis
<p>The manner in which the health need appeared or was expressed in the community was described as follows by key informants, focus group participants, and survey respondents:</p> <ul style="list-style-type: none"> <li>• More opportunities to get community members engaged in local government are needed.</li> <li>• More voter registration programs are needed across the community.</li> <li>• The community needs to build more partnerships across social services.</li> <li>• City and county leaders need to work together.</li> <li>• Health and social-service providers operate in silos; cross-sector connections are needed.</li> <li>• Building community connections doesn't seem like a focus in the area.</li> </ul>	<p>The following indicators performed worse in the service area when compared to state averages:</p> <ul style="list-style-type: none"> <li>• Infant Mortality</li> <li>• Child Mortality</li> <li>• Life Expectancy</li> <li>• Premature Age-Adjusted Mortality</li> <li>• Premature Death</li> <li>• Stroke Mortality</li> <li>• Heart Disease Mortality</li> <li>• Hypertension Mortality</li> <li>• Suicide Mortality</li> <li>• Unintentional Injuries Mortality</li> <li>• Diabetes Prevalence</li> <li>• Poor Mental Health Days</li> <li>• Frequent Mental Distress</li> <li>• Poor Physical Health Days</li> <li>• Frequent Physical Distress</li> <li>• Medically Underserved Area</li> <li>• Mental Health Providers</li> <li>• Psychiatry Providers</li> <li>• Specialty Care Providers</li> <li>• Primary Care Providers</li> <li>• Preventable Hospitalization</li> <li>• COVID-19 Cumulative Full Vaccination Rate</li> <li>• Homicide Rate</li> <li>• Firearm Fatalities Rate</li> <li>• Juvenile Arrest Rate</li> <li>• Some College</li> </ul>

<sup>7</sup> Robert Wood Johnson Foundation. 2016. Building a Culture of Health: Sense of Community. Retrieved 31 Jan 2022 from <https://www.rwjf.org/en/cultureofhealth/taking-action/making-health-a-shared-value/sense-of-community.html>

	<ul style="list-style-type: none"> <li>• Poor or Fair Health</li> <li>• Excessive Drinking</li> <li>• Drug Induced Death</li> <li>• Physical Inactivity</li> <li>• Access to Exercise Opportunities</li> <li>• Teen Birth Rate</li> <li>• Primary Care Shortage Area</li> <li>• Mental Health Care Shortage Area</li> </ul>	<ul style="list-style-type: none"> <li>• High School Completion</li> <li>• Disconnected Youth</li> <li>• Unemployment</li> <li>• Children in Single-Parent Households</li> <li>• Social Associations</li> <li>• Homelessness Rate</li> <li>• Long Commute - Driving Alone</li> <li>• Access to Public Transit</li> </ul>
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### **9. 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, and clothing) is having physical safety. Feeling unsafe affects the way people act and react to everyday life occurrences. Further, research has demonstrated that individuals exposed to violence in their homes, the community, and schools are more likely to experience depression and anxiety and demonstrate more aggressive, violent behavior.<sup>8</sup>

<b>Primary Data Analysis</b>	<b>Secondary Data Analysis</b>
<p>The manner in which the health need appeared or was expressed in the community was described as follows by key informants, focus group participants, and survey respondents:</p> <ul style="list-style-type: none"> <li>• Parts of the community are not safe and people live in fear of violence, including some parks in the area.</li> <li>• Housing for some farm workers’ camps is inadequate with poor water quality.</li> <li>• Youth need more after-school options that provide a safe environment.</li> <li>• Some parts of the community do not have sidewalks and proper lighting for safe walking.</li> <li>• Human trafficking is an issue in the area.</li> <li>• The current political environment makes some concerned for their safety.</li> <li>• There are not enough resources to address domestic violence and sexual assault.</li> </ul>	<p>The following indicators performed worse in the service area when compared to state averages:</p> <ul style="list-style-type: none"> <li>• Life Expectancy</li> <li>• Premature Death</li> <li>• Hypertension Mortality</li> <li>• Poor Mental Health Days</li> <li>• Frequent Mental Distress</li> <li>• Frequent Physical Distress</li> <li>• Poor or Fair Health</li> <li>• Physical Inactivity</li> <li>• Access to Exercise Opportunities</li> <li>• Homicide Rate</li> <li>• Firearm Fatalities Rate</li> <li>• Juvenile Arrest Rate</li> <li>• Motor Vehicle Crash Death</li> <li>• Disconnected Youth</li> <li>• Social Associations</li> <li>• Homelessness Rate</li> </ul>

<sup>8</sup> Lynn-Whaley, J., & Sugarmann, J. July 2017. The Relationship Between Community Violence and Trauma. Los Angeles: Violence Policy Center.

## Methods Overview

### Conceptual and Process Models

The data used to conduct the CHNA were identified and organized using the widely recognized Robert Wood Johnson Foundation's County Health Rankings model.<sup>9</sup> This model of population health includes the many factors that impact and account for individual health and well-being. Furthermore, to guide the overall process of conducting the assessment, a defined set of data collection and analytic stages were developed. For a detailed review of methods, see the technical section of this report.

### Public Comments from Previously Conducted CHNAs

Regulations require that nonprofit hospitals include written comments from the public on their previously conducted CHNAs and most recently adopted implementation strategies. Both AHRO and SSHNV requested written comments from the public on the 2019 CHNA and their recently adopted implementation strategies through [communitybenefit@ah.org](mailto:communitybenefit@ah.org) (AHRO) and [SHCB@sutterhealth.org](mailto:SHCB@sutterhealth.org) (SSHNV).

At the time of the development of this CHNA report, neither AHRO nor SSHNV had received written comments. However, input from the broader community was incorporated in the 2022 CHNA through key informant interviews, focus groups, and the service provider survey. Both AHRO and SSHNV will continue to use their websites as a tool to solicit public comments and ensure that these comments are considered as community input in the development of future CHNAs.

### Data Used in the CHNA

Data collected and analyzed included both primary or qualitative data and secondary or quantitative data. Primary data included 10 interviews with 28 community health experts, three focus groups conducted with a total of 10 community residents or community-facing service providers, and 16 responses to the Community Service Provider (CSP) survey. (A full listing of all participants can be seen in the technical section of this report.)

Secondary data included multiple datasets selected for use in the various stages of the analysis. A combination of mortality and socioeconomic datasets collected at subcounty levels was used to identify portions of the service area 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. Additionally, socioeconomic indicators were 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 to quality care; 3) social and economic factors such as race/ethnicity, income, educational attainment, employment, neighborhood safety, and similar; and 4) physical environment measures, such as air and water quality, transit and mobility resources, and housing

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<sup>9</sup> Robert Wood Johnson Foundation, and University of Wisconsin, 2021. County Health Rankings Model. Retrieved 31 Jan 2022 from <http://www.countyhealthrankings.org/>.

affordability. In all, 86 different health-outcome and health factor indicators were collected for the CHNA.

## Data Analysis

Primary and secondary data were analyzed to identify and prioritize the significant health needs within the service area. This included identifying 12 potential health needs (PHNs) in these communities. These PHNs were those identified in previously conducted CHNAs. Data were analyzed to discover which, if any, of the PHNs were present in the service area. After these were identified, health needs 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, including primary and secondary data collection, analysis, and results, see the technical section of this report.

## Description of Community Served

The definition of the community served was the primary service area jointly shared by AHRO and SSHNV. This area was defined by five ZIP Codes: 95901, 95953, 95961, 95991, and 95993. This service area was designated because the majority of patients served by both AHRO and SSHNV resided in these ZIP Codes. AHRO is located in Marysville, California, and SSHNV is located in Yuba City, California. Separated by the Feather River, these cities are located adjacent to one another and are part of the Yuba City Metropolitan Statistical Area as designated by the US Office of Management and Budget,<sup>10</sup> which is located approximately 40 miles due north of California's capital—Sacramento. The service area total population was 150,807 community residents and encompassed portions of both Sutter and Yuba Counties. The area is a rural community and is rich in diversity along a number of dimensions. The service area is shown in Figure 2.

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<sup>10</sup>See: <https://www.labormarketinfo.edd.ca.gov/definitions/metropolitan-areas.html>

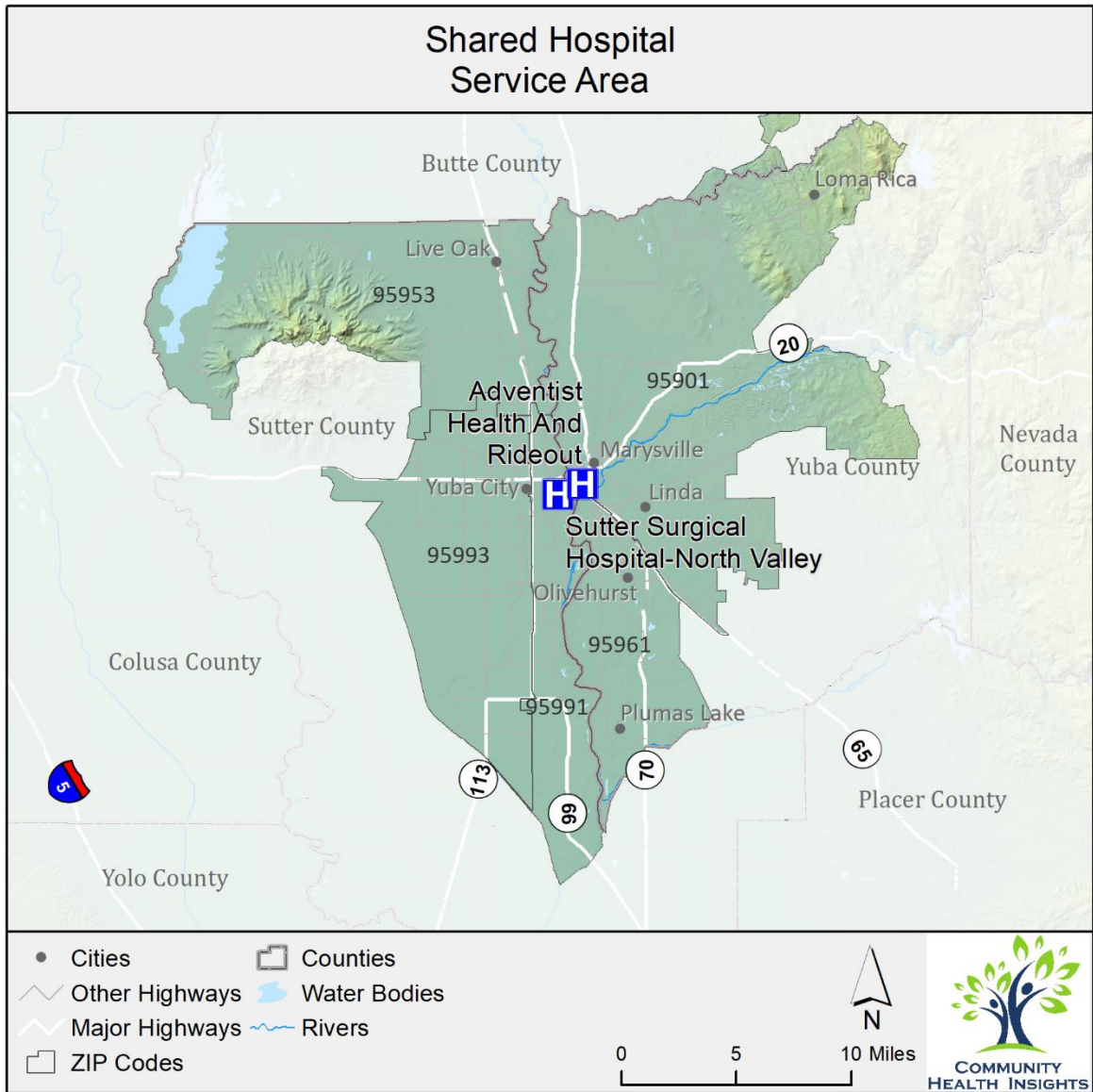


Figure 2: Shared service area of AHRO and SSHNV.

Population characteristics for each ZIP Code in the service area are presented in Table 2. These are compared to the state and county characteristics for descriptive purposes. Any ZIP Code with values that compared negatively to the state or county is highlighted.

Table 2: Population characteristics for each ZIP Code located in the AHRO/SSHNV service area.

ZIP Code	Total Population	% Non-White or Hispanic\Latinx	Median Age (yrs.)	Median Income	% Poverty	% Unemployment	% Uninsured	% Without High School Graduation	% With High Housing Costs	% With Disability
95953	10,925	58	34.2	\$57,949	18.9	6.7	8.0	29.4	35.4	15.0
95991	40,861	56.3	33.9	\$50,682	18.7	9.7	8.9	24.0	42.8	13.9
95993	37,077	54.7	37.8	\$69,019	12.1	7.6	7.1	19.1	29.1	12.6
<i>Sutter</i>	<i>96,109</i>	<i>53.8</i>	<i>35.7</i>	<i>\$59,050</i>	<i>15.5</i>	<i>8.3</i>	<i>8.0</i>	<i>21.8</i>	<i>35.5</i>	<i>13.6</i>
95901	33,455	46.6	31.7	\$54,851	17.3	7.5	7.3	16.9	38.1	16.2
95961	28,489	53.8	31.6	\$55,590	15.9	7.5	7.6	22.8	37.0	12.7
<i>Yuba</i>	<i>76,360</i>	<i>44.8</i>	<i>32.8</i>	<i>\$58,054</i>	<i>15.5</i>	<i>7.2</i>	<i>7.2</i>	<i>17.7</i>	<i>36.4</i>	<i>15.0</i>
<i>California</i>	<i>39,283,497</i>	<i>62.8</i>	<i>36.5</i>	<i>\$75,235</i>	<i>13.4</i>	<i>6.1</i>	<i>7.5</i>	<i>16.7</i>	<i>40.6</i>	<i>10.6</i>

Source: 2019 American Community Survey 5-year estimates; U.S. Census Bureau.

## Health Equity

The Robert Wood Johnson Foundation’s definition of health equity and social justice is used here to help establish a common understanding for the concept of health equity.

*“Health equity means that everyone has a fair and just opportunity to be healthier. This requires removing obstacles to health such as poverty, discrimination, and their consequences, including powerlessness and lack of access to good jobs with fair pay, quality education and housing, safe environments, and health care.”<sup>11</sup>*

Inequities experienced early and throughout one’s life, such as limited access to a quality education, have health consequences that appear later in life as health disparities. Health disparities are 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.”<sup>12</sup>

In the US, and many parts of the world, inequities are most apparent when comparing various racial and ethnic groups to one another. Using these comparisons between racial and ethnic populations, it is clear that health inequities persist across communities, including the AHRO and SSHNV service area.

<sup>11</sup> Robert Wood Johnsons Foundation. 2017. What is .Health Equity? And What Difference Does a Definition Make? Health Equity Issue Brief #1. Retrieved 31 Jan 2022 from [https://buildhealthyplaces.org/content/uploads/2017/05/health\\_equity\\_brief\\_041217.pdf](https://buildhealthyplaces.org/content/uploads/2017/05/health_equity_brief_041217.pdf) .

<sup>12</sup> Center for Disease Control and Prevention. 2008. Health Disparities Among Racial/Ethnic Populations. Community Health and Program Services (CHAPS): Atlanta: U.S. Department of Health and Human Services.



This section of the report shows inequities in health outcomes, comparing these between race and ethnic groups. These differences inform better planning for more targeted interventions.

## Health Outcomes - the Results of Inequity

The table below displays disparities among race and ethnic groups for the service area for life expectancy, mortality, and low birthweight.

Table 3: Health outcomes comparing race and ethnicity in the AHRO/SSHNV service area.

Health Outcomes	Description	American Indian\ Alaska Native	Asian	Black	Hispanic	White	Overall
<b>Sutter</b>							
Life Expectancy	Average number of years a person can expect to live.	~	85.7	78.2	86.2	76.0	78.9
Child Mortality	Number of deaths among children under age 18 per 100,000 population.	~	~	~	55.5	49.9	50.8
Premature Age-Adjusted Mortality	Number of deaths among residents under age 75 per 100,000 population (age-adjusted).	~	246.9	468.0	206.7	444.9	351.0
Premature Death	Years of potential life lost before age 75 per 100,000 population (age-adjusted).	~	5,584.1	~	4,565.3	9,186	7,101.8
Low Birthweight	Percentage of live births with low birthweight (< 2,500 grams).	~	9.3%	8.5%	6.5%	5.9%	6.8%
<b>Yuba</b>							
Life Expectancy	Average number of years a person can expect to live.	~	79.0	73.3	85.4	73.7	75.7
Child Mortality	Number of deaths among children under age 18 per 100,000 population.	~	~	~	40.2	63.1	56.6
Premature Age-Adjusted Mortality	Number of deaths among residents under age 75 per 100,000 population (age-adjusted).	~	327.3	556.8	234.2	555.3	472.0
Premature Death	Years of potential life lost before age 75 per 100,000 population (age-adjusted).	~	8,240.3	12,506.0	5,436.9	11,173.1	9,487.9
Low Birthweight	Percentage of live births with low birthweight (< 2,500 grams).	9.5%	10%	8.3%	6.3%	6.4%	6.8%

~ Data Not Available

Data sources included in the technical section of the report.

When examining data across race and ethnic categories, inequities are apparent. For example, life expectancy for Whites in Sutter County is lower than all other race and ethnic groups, and almost 10 years less than Asians. Inequities are also apparent when examining the rates of each group across both counties included in the assessment. For example, life expectancy for Whites in Sutter County, the lowest among all groups, is 76.0 years, whereas life expectancy among Whites in Yuba County is 73.7 years.

## Health Factors - Inequities in the Service Area

Inequities can be seen in data that help describe health factors in the service area, such as education attainment and income. These health factors are displayed in the table below and are compared across race and ethnic groups.

Table 4: Health factors comparing race and ethnicity in the AHRO/SSHNV service area.

Health Factors	Description	American Indian\ Alaska Native	Asian	Black	Hispanic	White	Overall
<b>Sutter</b>							
Some College <sup>a</sup>	Percentage of adults ages 25 and over with some post-secondary education.	59.7%	46.2%	82.5%	35.7%	65.3%	54.8%
High School Completion <sup>a</sup>	Percentage of adults ages 25 and over with at least a high school diploma or equivalent.	79.7%	66.5%	95.1%	56.2%	91.2%	78.2%
Third Grade Reading Level	Average grade level performance for 3rd graders on English Language Arts standardized tests	~	3.1	2.6	2.5	2.9	2.8
Third Grade Math Level	Average grade level performance for 3rd graders on math standardized tests	~	2.8	2.1	2.3	2.6	2.5
Children in Poverty	Percentage of people under age 18 in poverty.	8.6%	13.9%	2.4%	30.1%	13.2%	17.4%
Median Household Income	The income where half of households in a county earn more and half of households earn less.	\$42,212	\$59,215	\$87,438	\$44,196	\$67,656	\$60,910
Uninsured Population <sup>b</sup>	Percentage of the civilian non-institutionalized population without health insurance.	4.5%	7.2%	3.1%	13.7%	4.8%	8%
<b>Yuba</b>							
Some College <sup>a</sup>	Percentage of adults ages 25 and over with some post-secondary education.	52.8%	61.4%	71.8%	40.3%	63.9%	58.7%

Health Factors	Description	American Indian\ Alaska Native	Asian	Black	Hispanic	White	Overall
High School Completion <sup>a</sup>	Percentage of adults ages 25 and over with at least a high school diploma or equivalent.	69.6%	81.1%	89.1%	64.2%	88.3%	82.3%
Third Grade Reading Level	Average grade level performance for 3rd graders on English Language Arts standardized tests	~	2.7	2.8	2.4	2.9	2.7
Third Grade Math Level	Average grade level performance for 3rd graders on math standardized tests	~	2.6	2.3	2.5	2.8	2.6
Children in Poverty	Percentage of people under age 18 in poverty.	22.2%	20.2%	8.4%	24%	15.2%	18.8%
Median Household Income	The income where half of households in a county earn more and half of households earn less.	\$30,966	\$63,897	\$86,971	\$53,465	\$58,434	\$56,607
Uninsured Population <sup>b</sup>	Percentage of the civilian non-institutionalized population without health insurance.	19.1%	10.7%	8.5%	8.1%	6.1%	7.2%

~ Data Not Available

Unless otherwise noted, data sources included in the technical section of the report.

<sup>a</sup>From 2019 American Community Survey 5-year estimates tables B15002, C15002B, C15002C, C15002D, C15002H, and C15002I.

<sup>b</sup>From 2019 American Community Survey 5-year estimates table S2701.

Those upstream factors associated with health outcomes also describe inequities in the service area. For example, high school completion rates for Hispanics were notably lower than other race and ethnic groups across both counties. Further, the rates of children living in poverty varied significantly across race and ethnic groups in both counties.

## Population Groups Experiencing Disparities

Figure 3 describes populations in the service area identified through qualitative data analysis that were identified as experiencing health disparities. Interview participants were asked, “What specific groups of community members experience health issues the most?” Responses were analyzed by counting the total number of times all key informants and focus-group participants mentioned a particular group as one experiencing disparities. Figure 3 displays the results of this analysis. The groups are not mutually exclusive—one group could be a subset of another group. One of the purposes of identifying the sub-populations was to help guide additional qualitative data collection efforts to focus on the needs of these population groups.

## Frequency of Mentions in Interviews

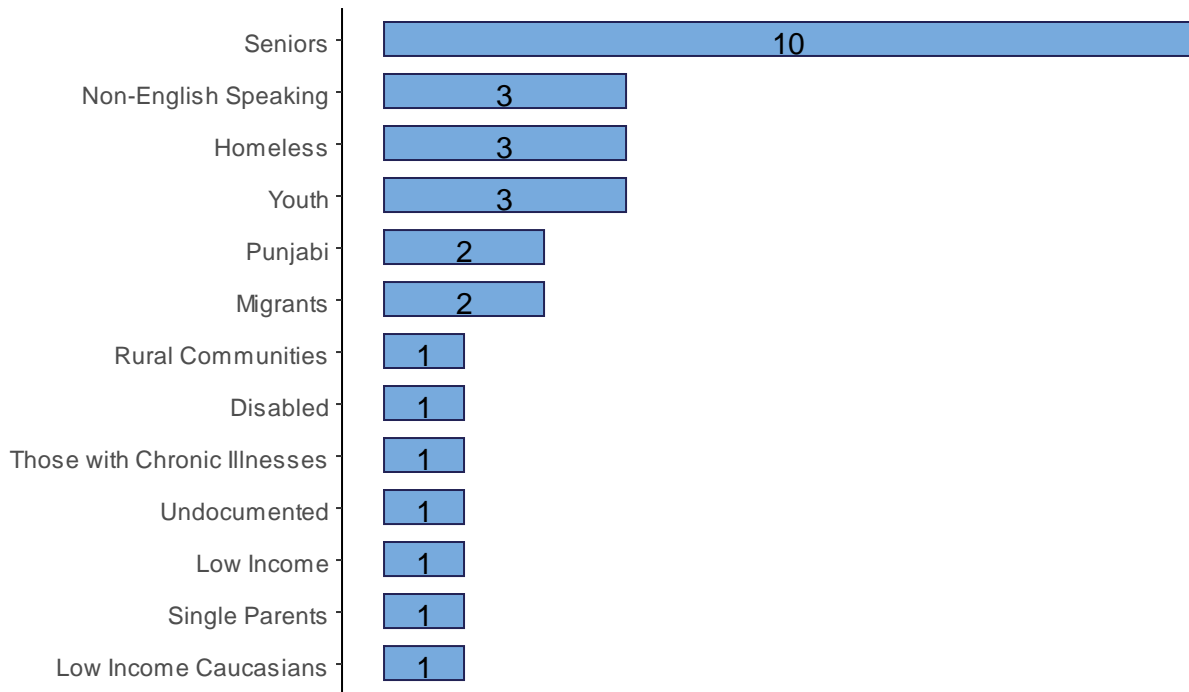


Figure 3: Populations experiencing disparities the AHRO/SSHNV service area.

## California Healthy Places Index

Figure 4 displays the California Healthy Places Index (HPI)<sup>13</sup> values for the service area. The HPI is an index based on 25 health-related measures for communities across California. These measures included in the HPI were selected based on their known relationship to life expectancy and other health outcomes. These values are combined into a final score representing the overall health and well-being of the community which can then be used to compare the factors influencing health between communities. Higher HPI index values are found in communities with a collection of factors that contribute to greater health, and lower HPI values are found in communities where these factors are less present.

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<sup>13</sup> Public Health Alliance of Southern California. 2021. The California Health Places Index (HPI): About. Retrieved 26 July 2021 from <https://healthyplacesindex.org/about/>.

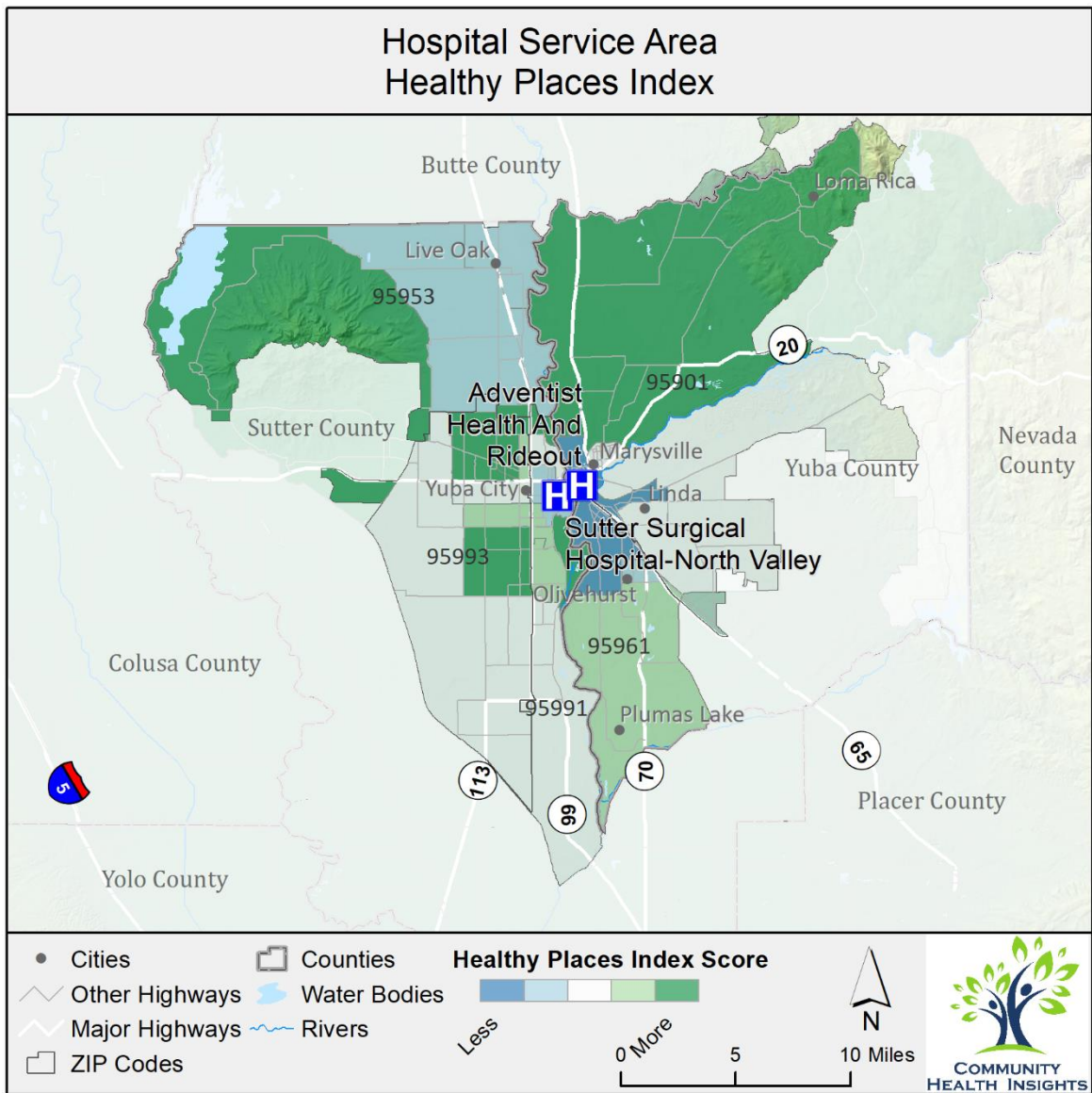


Figure 4: Healthy Places Index for AHRO/SSHNV service area.

Areas with the darkest blue shading in Figure 4 have the lowest overall HPI scores, indicating factors leading to less healthy neighborhoods. In these communities there are likely to be a higher concentration of residents experiencing health disparities. In the AHRO and SSHNV service area, these areas include Marysville (including Linda) and the areas south of AHRO hospital. Further, the community of Live Oak also has a lower HPI score.

## Communities of Concern

Communities of Concern are geographic areas within the service area 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 methodology because, after the service area has been assessed more broadly, they allow for a focus on those portions of the region likely experiencing the greatest health disparities. Geographic Communities of Concern were identified using a combination of primary and secondary data sources. (Refer to the technical section of this report for an in-depth description of how these are identified). Analysis of both primary and secondary data revealed four ZIP Codes that met the criteria to be classified as Communities of Concern. These are noted in Table 5, with the census population provided for each, and are displayed in Figure 5.

*Table 5: Identified Communities of Concern for the AHRO/SSHNV service area.*

<i>ZIP Code</i>	<i>Community\Area</i>	<i>Population</i>
95901	Marysville, Linda	33,455
95953	Live Oak	10,925
95961	Olivehurst	28,489
95991	South Yuba City	40,861
<i>Total Population in Communities of Concern</i>		<i>113,730</i>
<i>Total Population in Hospital Service Area</i>		<i>150,807</i>
<i>Percentage of Service Area Population in Community of Concern</i>		<i>75.4%</i>

Source: 2019 American Community Survey 5-year estimates; U.S. Census Bureau.

Figure 5 displays the ZIP Codes highlighted in pink that are Communities of Concern for the service area.

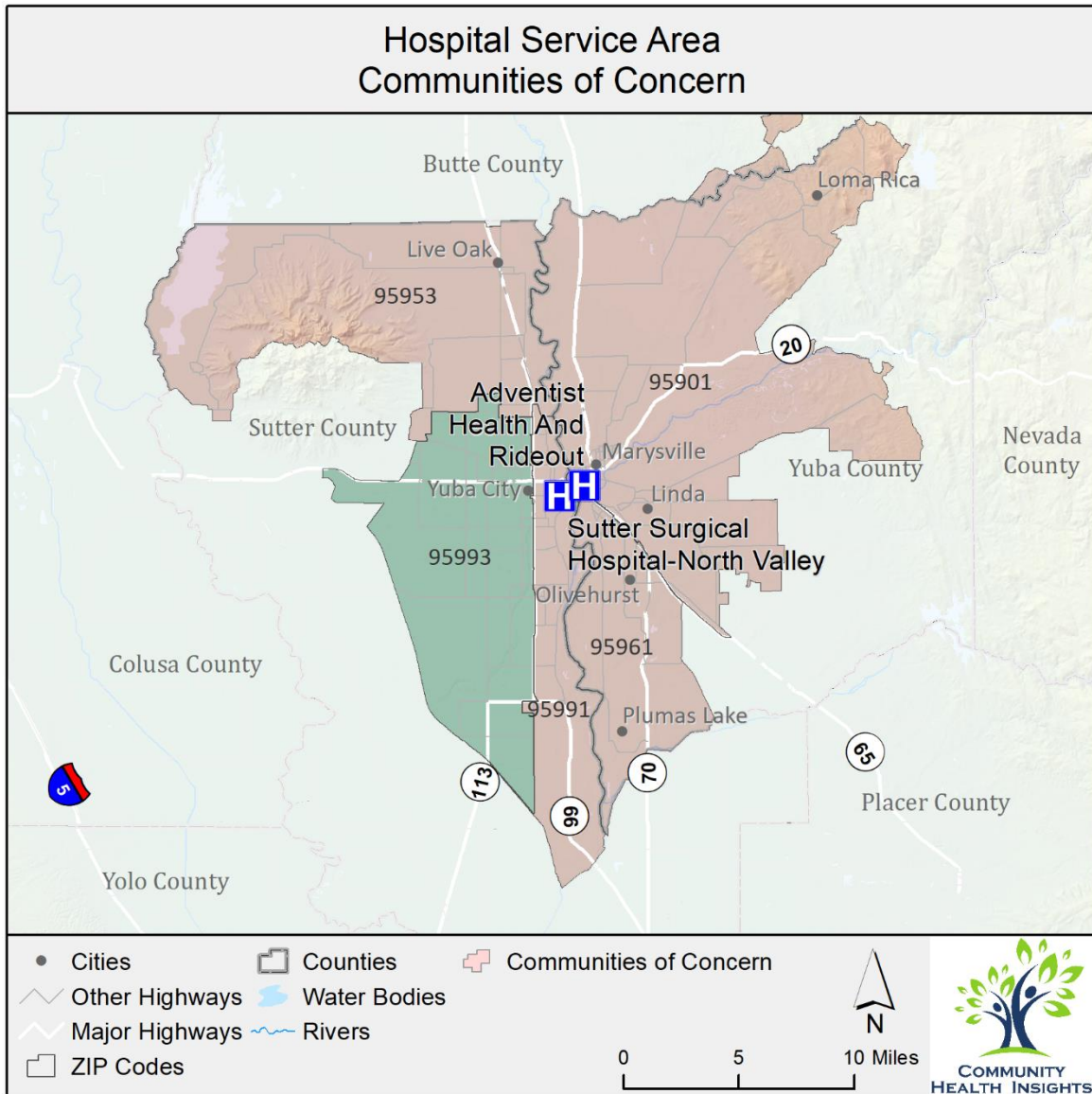


Figure 5: AHRO/SSHNV service area Communities of Concern.

In rural communities ZIP Codes often cover large geographical areas. Portions of these areas may be sparsely populated or unpopulated as they are reserved for agricultural use or left undeveloped. This is the case with many of the ZIP Codes identified as Communities of Concern.

As a result, two additional steps were taken to further highlight those portions of these ZIP Code Communities of Concern in which disadvantaged populations were likely to be concentrated. First, the distribution of populations across the county were reviewed to identify areas with a higher population density. Figure 6 displays the population distribution across the service area. In the figure each blue dot represents 200 residents.

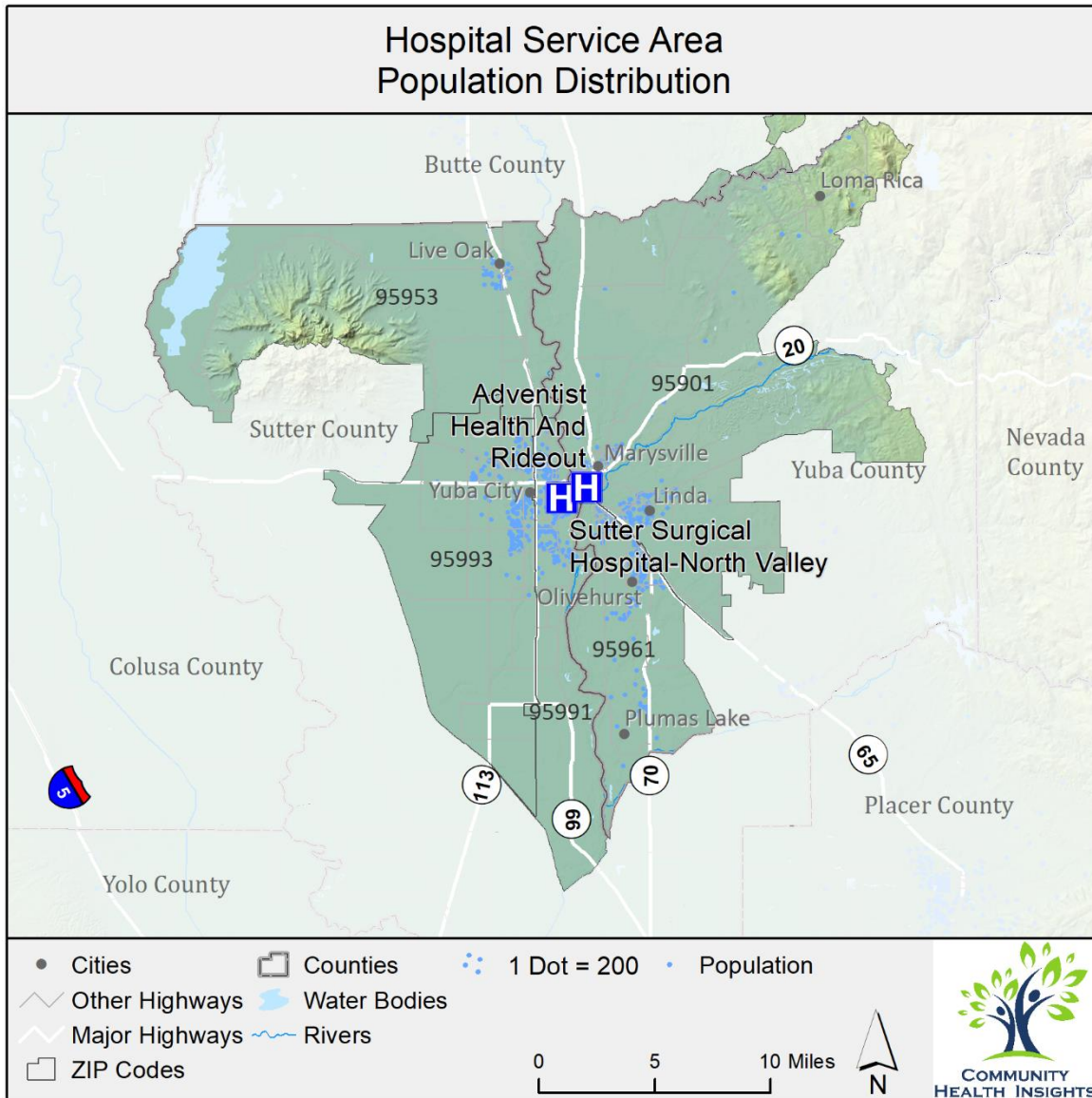


Figure 6: AHRO/SSHNV service area population distribution.

Next, the Census tracts within each ZIP Code Community of Concern that had the highest HPI values were identified. This led to an identification of Census tracts that provided a more spatially refined representation of the Communities of Concern within the identified ZIP Codes. These are displayed in Figure 7.



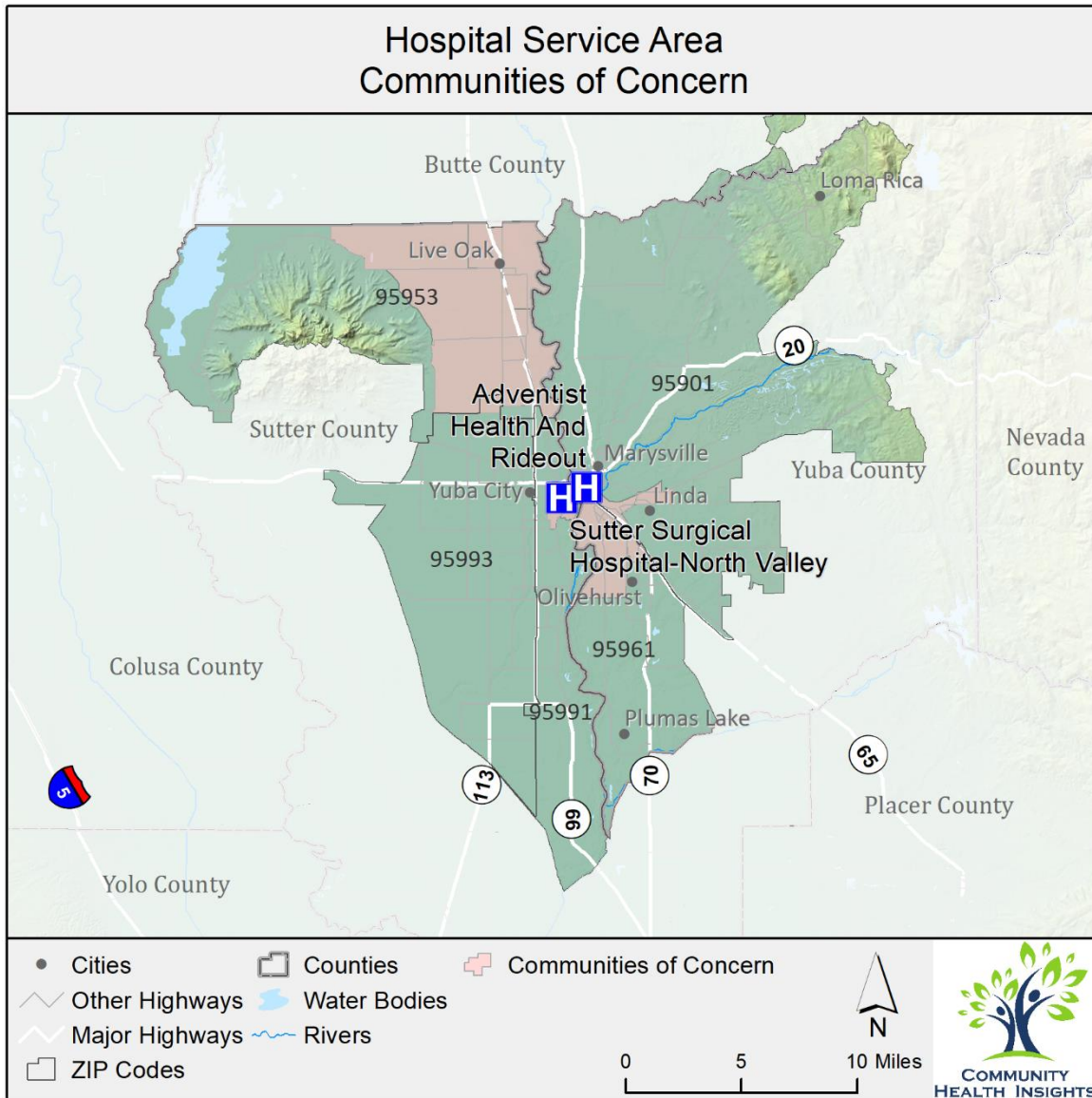
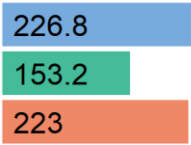
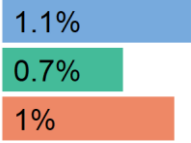
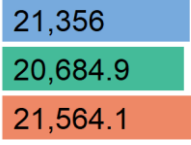
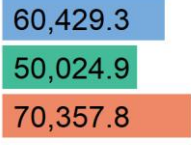


Figure 7: Census tract level Communities of Concern.

## The Impact of COVID-19 on Health Needs

COVID-19 related health indicators for the service area are noted in Table 6.

Table 6: COVID-19-related rates for the AHRO/SSHNV service area.

Indicators	Description	Sutter	Yuba	California	
COVID-19 Mortality	Number of deaths due to COVID-19 per 100,000 population.	226.8	153.2	223.0	Sutter: 
COVID-19 Case Fatality	Percentage of COVID-19 deaths per laboratory-confirmed COVID-19 cases.	1.1%	0.7%	1.0%	Sutter: 
COVID-19 Cumulative Incidence	Number of laboratory-confirmed COVID-19 cases per 100,000 population.	21,356.0	20,684.9	21,564.1	Sutter: 
COVID-19 Cumulative Full Vaccination Rate	Number of completed COVID-19 vaccinations per 100,000 population.	60,429.3	50,024.9	70,357.8	Sutter: 

COVID-19 data collected on March 23, 2022

Data indicate that Sutter County experienced higher mortality and case fatality rates than the California state benchmark, whereas Yuba County experienced lower rates. Further, both counties had cumulative full vaccination rates lower than the state benchmark, where Yuba County had the lowest among the service area.

Key informants and focus group participants were asked how the COVID-19 pandemic had impacted the health needs they described during interviews. Community Service Provider survey respondents were also asked to identify ways in which COVID-19 impacted health needs in the communities they served. A summary of their responses is shown in Table 7.

Table 7: The impacts of COVID-19 on health need as identified in primary data sources.

Key Informant and Focus Group Responses	Community Service Provider Survey Responses
<ul style="list-style-type: none"> <li>The pandemic hit the most vulnerable in the community the hardest.</li> <li>Those in the community with limited technology have been left behind as many healthcare services moved to telehealth.</li> <li>Those with limited English do not get adequate information regarding the pandemic as not all information is offered in multiple languages.</li> </ul>	<ul style="list-style-type: none"> <li>Isolation is harming the mental health of community members.</li> <li>Residents encounter economic hardships from lost or reduced employment.</li> <li>Residents delay or forgo healthcare to limit their exposure to the virus.</li> <li>Youth no longer have ready access to the services they previously received at school</li> </ul>

Key Informant and Focus Group Responses	Community Service Provider Survey Responses
<ul style="list-style-type: none"> <li>• Many young people in the community are experiencing development delays.</li> <li>• The degree of isolation among many community members has substantially increased.</li> <li>• Many preventative services and health education programs were discontinued during the pandemic.</li> <li>• Misinformation has created a lot of confusion in the community regarding the virus and the vaccine.</li> <li>• Many children fell behind in school, and remain behind as a result.</li> <li>• Many parents were unable to help their children with virtual school as they had to work outside the home.</li> <li>• The need for mental and behavioral health services increased over the pandemic, especially among youth and the elderly.</li> <li>• Clinics are reporting that patients are avoiding preventative care services such as wellness visits and routine vaccines.</li> <li>• Substance use has increased over the pandemic.</li> <li>• Some in the community are not taking the virus seriously, and there are still many that are not vaccinated, adding stress to the healthcare system.</li> <li>• The trust in government has eroded during the pandemic.</li> </ul>	<p>(e.g., free/reduced lunch, mental and physical health services).</p> <ul style="list-style-type: none"> <li>• Residents in the community are being evicted from their homes.</li> </ul>

## Resources Potentially Available to Meet the Significant Health Needs

In all, 227 resources were identified in the service area that were potentially available to meet the identified, significant health needs. These resources were provided by a total of 86 social service, nonprofit, governmental organizations, community agencies, and programs identified in the CHNA. The identification method included starting with the list of resources from the 2019 CHNA report, verifying that the resources still existed, and then adding newly identified resources into the 2022 CHNA report. Examination of the resources revealed the following numbers of resources for each significant health need as shown in Table 8.

*Table 8: Resources potentially available to meet significant health needs in priority order.*

<i>Significant Health Needs (in Priority Order)</i>	<i>Number of Resources</i>
Access to Mental/Behavioral Health and Substance Use Services	35
Access to Basic Needs Such as Housing, Jobs, and Food	33
Active Living and Healthy Eating	22
Access to Specialty and Extended Care	23

<i>Significant Health Needs (in Priority Order)</i>	<i>Number of Resources</i>
Access to Quality Primary Care Health Services	29
Access to Functional Needs	6
Injury and Disease Prevention and Management	34
Increased Community Connections	32
Safe and Violence-Free Environment	13
<b>Total Resources</b>	<b>227</b>

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

## Impact and Evaluation of Actions Taken by Hospital

Regulations require that each hospital’s CHNA report include “an evaluation of the impact of any actions that were taken since the hospital facility finished conducting its immediately preceding CHNA to address the significant health needs identified in the hospital facility’s prior CHNA(s) (p. 78969).”<sup>14</sup> Both AHRO and SSHNV invested efforts to address the significant health needs identified in the prior CHNA. Appendices A and B include details of those efforts.

## Conclusion

CHNAs play an important role in helping nonprofit hospitals and other community organizations determine where to focus community benefit and health improvement efforts, including focusing efforts in geographic locations and on specific populations experiencing inequities leading to health disparities. Data in the CHNA report can help provide nonprofit hospitals and community service providers with content to work in collaboration to engage in meaningful community work.

Please send any feedback about this CHNA report to [communitybenefit@ah.org](mailto:communitybenefit@ah.org) (AHRO) or [SHCB@sutterhealth.org](mailto:SHCB@sutterhealth.org) (SSHNV) with “CHNA Comments” in the subject line. Feedback received will be incorporate into the next CHNA.

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<sup>14</sup> Federal Register, Vol. 79, No. 250, (Wednesday, December 31, 2014). Department of the Treasury, Internal Revenue Service.

## 2022 CHNA Technical Section

The following section presents a detailed account of data collection, analysis, and results for the Adventist Health and Rideout, and Sutter Surgical Center North Valley hospital service area (HSA).

### Results of Data Analysis Compiled 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. Indicator values for Sutter and Yuba counties were compared to the California state benchmark and are highlighted below when performance was worse in the counties than in the state. The associated figures show rates for the counties compared to the California state rates.

#### Length of Life

Table 9: County length of life indicators compared to state benchmarks.

Indicators	Description	Sutter	Yuba	California	
<b>Early Life</b>					
Infant Mortality	Number of all infant deaths (within 1 year), per 1,000 live births.	5.6	6.8	4.2	Sutter: 5.6 Yuba: 6.8 California: 4.2
Child Mortality	Number of deaths among children under age 18 per 100,000 population.	50.8	56.6	36.0	Sutter: 50.8 Yuba: 56.6 California: 36
Life Expectancy	Average number of years a person can expect to live.	78.9	75.7	81.7	Sutter: 78.9 Yuba: 75.7 California: 81.7
<b>Overall</b>					
Premature Age-Adjusted Mortality	Number of deaths among residents under age 75 per 100,000 population (age-adjusted).	351.0	472.0	268.4	Sutter: 351 Yuba: 472 California: 268.4
Premature Death	Years of potential life lost before age 75 per 100,000 population (age-adjusted).	7,101.8	9,487.9	5,253.1	Sutter: 7,101.8 Yuba: 9,487.9 California: 5,253.1

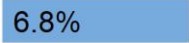
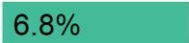
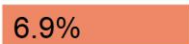


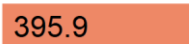
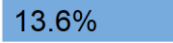

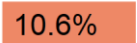


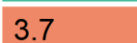
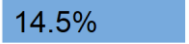

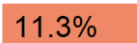



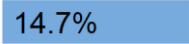

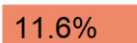
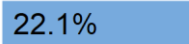
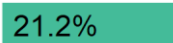
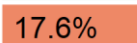
Indicators	Description	Sutter	Yuba	California	
Stroke Mortality	Number of deaths due to stroke per 100,000 population.	59.9	45.3	41.2	Sutter: 59.9 Yuba: 45.3 California: 41.2
Chronic Lower Respiratory Disease Mortality	Number of deaths due to chronic lower respiratory disease per 100,000 population.	48.0	67.2	34.8	Sutter: 48 Yuba: 67.2 California: 34.8
Diabetes Mortality	Number of deaths due to diabetes per 100,000 population.	22.7	23.5	24.1	Sutter: 22.7 Yuba: 23.5 California: 24.1
Heart Disease Mortality	Number of deaths due to heart disease per 100,000 population.	196.0	190.5	159.5	Sutter: 196 Yuba: 190.5 California: 159.5
Hypertension Mortality	Number of deaths due to hypertension per 100,000 population.	14.5	12.7	13.8	Sutter: 14.5 Yuba: 12.7 California: 13.8
<b>Cancer, Liver, and Kidney Disease</b>					
Cancer Mortality	Number of deaths due to cancer per 100,000 population.	183.6	188.6	152.9	Sutter: 183.6 Yuba: 188.6 California: 152.9
Liver Disease Mortality	Number of deaths due to liver disease per 100,000 population.	16.4	18.0	13.9	Sutter: 16.4 Yuba: 18 California: 13.9
Kidney Disease Mortality	Number of deaths due to kidney disease per 100,000 population.	15.1	18.4	9.7	Sutter: 15.1 Yuba: 18.4 California: 9.7
<b>Intentional and Unintentional Injuries</b>					

Indicators	Description	Sutter	Yuba	California	
Suicide Mortality	Number of deaths due to suicide per 100,000 population.	13.1	17.8	11.2	Sutter: 13.1 Yuba: 17.8 California: 11.2
Unintentional Injuries Mortality	Number of deaths due to unintentional injuries per 100,000 population.	46.2	55.6	35.7	Sutter: 46.2 Yuba: 55.6 California: 35.7
<b>COVID-19</b>					
COVID-19 Mortality	Number of deaths due to COVID-19 per 100,000 population.	226.8	153.2	223.0	Sutter: 226.8 Yuba: 153.2 California: 223
COVID-19 Case Fatality	Percentage of COVID-19 deaths per laboratory-confirmed COVID-19 cases.	1.1%	0.7%	1.0%	Sutter: 1.1% Yuba: 0.7% California: 1%
<b>Other</b>					
Alzheimer's Disease Mortality	Number of deaths due to Alzheimer's disease per 100,000 population.	42.6	34.3	41.2	Sutter: 42.6 Yuba: 34.3 California: 41.2
Influenza and Pneumonia Mortality	Number of deaths due to influenza and pneumonia per 100,000 population.	20.6	18.5	16.0	Sutter: 20.6 Yuba: 18.5 California: 16

## Quality of Life

Table 10: County quality of life indicators compared to state benchmarks.

Indicators	Description	Sutter	Yuba	California	
<b>Chronic Disease</b>					
Diabetes Prevalence	Percentage of adults ages 20 and above with diagnosed diabetes.	13.1%	12.7%	8.8%	Sutter: 13.1% Yuba: 12.7% California: 8.8%

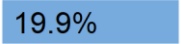
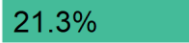
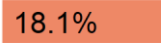
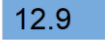

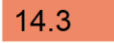
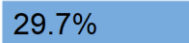

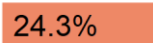
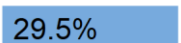
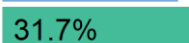
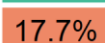
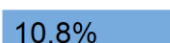





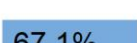
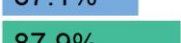
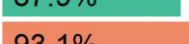
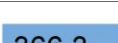
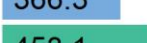
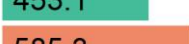
Indicators	Description	Sutter	Yuba	California	
Low Birthweight	Percentage of live births with low birthweight (< 2,500 grams).	6.8%	6.8%	6.9%	Sutter:  Yuba:  California: 
HIV Prevalence	Number of people ages 13 years and older living with a diagnosis of human immunodeficiency virus (HIV) infection per 100,000 population.	125.4	141.8	395.9	Sutter:  Yuba:  California: 
Disability	Percentage of the total civilian noninstitutionalized population with a disability	13.6%	15.0%	10.6%	Sutter:  Yuba:  California: 
<b>Mental Health</b>					
Poor Mental Health Days	Average number of mentally unhealthy days reported in past 30 days (age-adjusted).	4.9	4.7	3.7	Sutter:  Yuba:  California: 
Frequent Mental Distress	Percentage of adults reporting 14 or more days of poor mental health per month (age-adjusted).	14.5%	15.0%	11.3%	Sutter:  Yuba:  California: 
Poor Physical Health Days	Average number of physically unhealthy days reported in past 30 days (age-adjusted).	4.9	4.9	3.9	Sutter:  Yuba:  California: 
Frequent Physical Distress	Percentage of adults reporting 14 or more days of poor physical health per month (age-adjusted).	14.7%	14.9%	11.6%	Sutter:  Yuba:  California: 
Poor or Fair Health	Percentage of adults reporting fair or poor health (age-adjusted).	22.1%	21.2%	17.6%	Sutter:  Yuba:  California: 
<b>Cancer</b>					

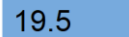

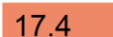
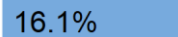

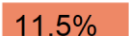


Indicators	Description	Sutter	Yuba	California	
Colorectal Cancer Prevalence	Colon and rectum cancers per 100,000 population (age-adjusted).	32.5	40.4	34.8	Sutter: 32.5 Yuba: 40.4 California: 34.8
Breast Cancer Prevalence	Female in situ breast cancers per 100,000 female population (age-adjusted).	24.0	18.6	27.9	Sutter: 24 Yuba: 18.6 California: 27.9
Lung Cancer Prevalence	Lung and bronchus cancers per 100,000 population (age-adjusted).	52.2	66.1	40.9	Sutter: 52.2 Yuba: 66.1 California: 40.9
Prostate Cancer Prevalence	Prostate cancers per 100,000 male population (age-adjusted).	89.7	76.4	91.2	Sutter: 89.7 Yuba: 76.4 California: 91.2
<b>COVID-19</b>					
COVID-19 Cumulative Incidence	Number of laboratory-confirmed COVID-19 cases per 100,000 population.	21,356.0	20,684.9	21,564.1	Sutter: 21,356 Yuba: 20,684.9 California: 21,564.1
<b>Other</b>					
Asthma ED Rates	Emergency department visits due to asthma per 10,000 (age-adjusted).	298.0	429.0	422.0	Sutter: 298 Yuba: 429 California: 422
Asthma ED Rates for Children	Emergency department visits due to asthma among ages 5-17 per 10,000 population ages 5-17 (age-adjusted).	459.0	504.0	601.0	Sutter: 459 Yuba: 504 California: 601

## Health Behavior










Table 11: County health behavior indicators compared to state benchmarks.

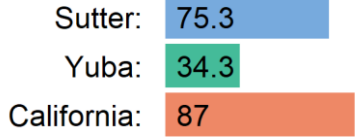
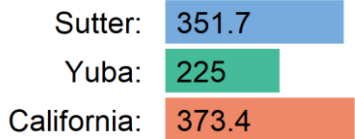
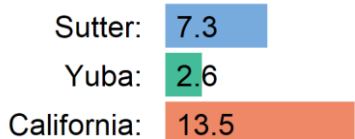
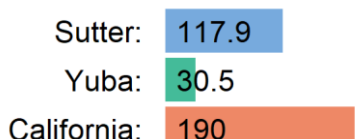
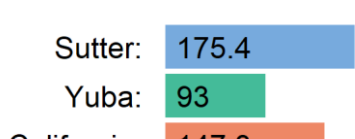
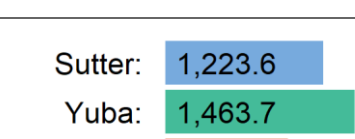
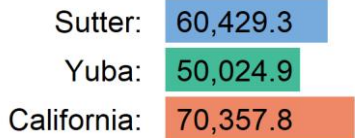
Indicators	Description	Sutter	Yuba	California	
Excessive Drinking	Percentage of adults reporting binge or heavy drinking (age-adjusted).	19.9%	21.3%	18.1%	Sutter:  Yuba:  California: 
Drug Induced Death	Drug induced deaths per 100,000 (age-adjusted).	12.9	23.8	14.3	Sutter:  Yuba:  California: 
Adult Obesity	Percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m2.	29.7%	29.4%	24.3%	Sutter:  Yuba:  California: 
Physical Inactivity	Percentage of adults ages 20 and over reporting no leisure-time physical activity.	29.5%	31.7%	17.7%	Sutter:  Yuba:  California: 
Limited Access to Healthy Foods	Percentage of population who are low-income and do not live close to a grocery store.	10.8%	12.0%	3.3%	Sutter:  Yuba:  California: 
Food Environment Index	Index of factors that contribute to a healthy food environment, from 0 (worst) to 10 (best).	7.1	6.9	8.8	Sutter:  Yuba:  California: 
Access to Exercise Opportunities	Percentage of population with adequate access to locations for physical activity.	67.1%	87.9%	93.1%	Sutter:  Yuba:  California: 
Chlamydia Incidence	Number of newly diagnosed chlamydia cases per 100,000 population.	366.3	453.1	585.3	Sutter:  Yuba:  California: 

Indicators	Description	Sutter	Yuba	California	
Teen Birth Rate	Number of births per 1,000 female population ages 15-19.	19.5	28.9	17.4	Sutter:  Yuba:  California: 
Adult Smoking	Percentage of adults who are current smokers (age-adjusted).	16.1%	17.2%	11.5%	Sutter:  Yuba:  California: 

### Clinical Care

Table 12: County clinical care indicators compared to state benchmarks.

Indicators	Description	Sutter	Yuba	California	
Primary Care Shortage Area	Presence of a primary care health professional shortage area within the county.	No	Yes		Sutter: No Yuba:  California:
Dental Care Shortage Area	Presence of a dental care health professional shortage area within the county.	No	Yes		Sutter: No Yuba:  California:
Mental Health Care Shortage Area	Presence of a mental health professional shortage area within the county.	Yes	Yes		Sutter:  Yuba:  California:
Medically Underserved Area	Presence of a medically underserved area within the county.	Yes	Yes		Sutter:  Yuba:  California:
Mammography Screening	Percentage of female Medicare enrollees ages 65-74 that received an annual mammography screening.	38.0%	32.0%	36.0%	Sutter:  Yuba:  California: 

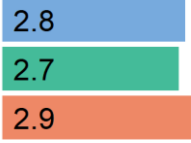





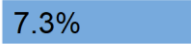
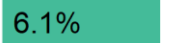

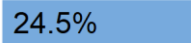

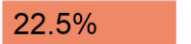








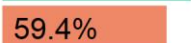
Indicators	Description	Sutter	Yuba	California	
Dentists	Dentists per 100,000 population.	75.3	34.3	87.0	Sutter:  Sutter: 75.3 Yuba: 34.3 California: 87
Mental Health Providers	Mental health providers per 100,000 population.	351.7	225.0	373.4	Sutter:  Sutter: 351.7 Yuba: 225 California: 373.4
Psychiatry Providers	Psychiatry providers per 100,000 population.	7.3	2.6	13.5	Sutter:  Sutter: 7.3 Yuba: 2.6 California: 13.5
Specialty Care Providers	Specialty care providers (non-primary care physicians) per 100,000 population.	117.9	30.5	190.0	Sutter:  Sutter: 117.9 Yuba: 30.5 California: 190
Primary Care Providers	Primary care physicians per 100,000 population + other primary care providers per 100,000 population.	175.4	93.0	147.3	Sutter:  Sutter: 175.4 Yuba: 93 California: 147.3
Preventable Hospitalization	Preventable hospitalizations per 100,000 (age-sex-poverty adjusted)	1,223.6	1,463.7	948.3	Sutter:  Sutter: 1,223.6 Yuba: 1,463.7 California: 948.3
<b>COVID-19</b>					
COVID-19 Cumulative Full Vaccination Rate	Number of completed COVID-19 vaccinations per 100,000 population.	60,429.3	50,024.9	70,357.8	Sutter:  Sutter: 60,429.3 Yuba: 50,024.9 California: 70,357.8

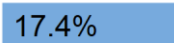
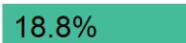
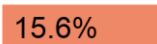
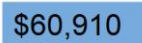
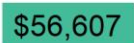
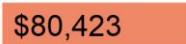


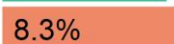



### Socio-Economic and Demographic Factors

Table 13: County socio-economic and demographic factors indicators compared to state benchmarks.

Indicators	Description	Sutter	Yuba	California
<b>Community Safety</b>				

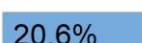
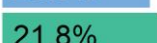
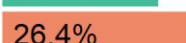
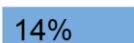
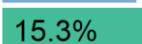
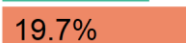
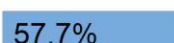
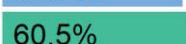
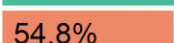
Indicators	Description	Sutter	Yuba	California	
Homicide Rate	Number of deaths due to homicide per 100,000 population.	4.4	7.2	4.8	Sutter: 4.4 Yuba: 7.2 California: 4.8
Firearm Fatalities Rate	Number of deaths due to firearms per 100,000 population.	10.8	17.2	7.8	Sutter: 10.8 Yuba: 17.2 California: 7.8
Violent Crime Rate	Number of reported violent crime offenses per 100,000 population.	351.8	413.7	420.9	Sutter: 351.8 Yuba: 413.7 California: 420.9
Juvenile Arrest Rate	Felony juvenile arrests per 1,000 juveniles	2.2	2.9	2.1	Sutter: 2.2 Yuba: 2.9 California: 2.1
Motor Vehicle Crash Death	Number of motor vehicle crash deaths per 100,000 population.	17.5	17.9	9.5	Sutter: 17.5 Yuba: 17.9 California: 9.5
<b>Education</b>					
Some College	Percentage of adults ages 25-44 with some post-secondary education.	58.1%	62.3%	65.7%	Sutter: 58.1% Yuba: 62.3% California: 65.7%
High School Completion	Percentage of adults ages 25 and over with a high school diploma or equivalent.	78.2%	82.3%	83.3%	Sutter: 78.2% Yuba: 82.3% California: 83.3%
Disconnected Youth	Percentage of teens and young adults ages 16-19 who are neither working nor in school.	8.4%	6.4%	6.4%	Sutter: 8.4% Yuba: 6.4% California: 6.4%




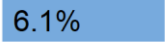
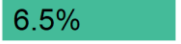
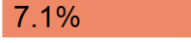
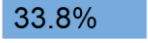
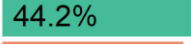
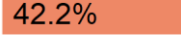
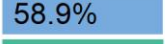

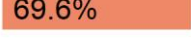


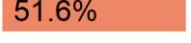





Indicators	Description	Sutter	Yuba	California	
Third Grade Reading Level	Average grade level performance for 3rd graders on English Language Arts standardized tests	2.8	2.7	2.9	Sutter:  Yuba:  California: 
Third Grade Math Level	Average grade level performance for 3rd graders on math standardized tests	2.5	2.6	2.7	Sutter:  Yuba:  California: 
<b>Employment</b>					
Unemployment	Percentage of population ages 16 and older unemployed but seeking work.	7.3%	6.1%	4.0%	Sutter:  Yuba:  California: 
<b>Family and Social Support</b>					
Children in Single-Parent Households	Percentage of children that live in a household headed by single parent.	24.5%	18.8%	22.5%	Sutter:  Yuba:  California: 
Social Associations	Number of membership associations per 10,000 population.	5.9	3.8	5.9	Sutter:  Yuba:  California: 
Residential Segregation (Non-White/White)	Index of dissimilarity where higher values indicate greater residential segregation between non-White and White county residents.	21.5	26.2	38.0	Sutter:  Yuba:  California: 
<b>Income</b>					
Children Eligible for Free Lunch	Percentage of children enrolled in public schools that are eligible for free or reduced price lunch.	62.5%	68.5%	59.4%	Sutter:  Yuba:  California: 

Indicators	Description	Sutter	Yuba	California	
Children in Poverty	Percentage of people under age 18 in poverty.	17.4%	18.8%	15.6%	Sutter:  Yuba:  California: 
Median Household Income	The income where half of households in a county earn more and half of households earn less.	\$60,910	\$56,607	\$80,423	Sutter:  Yuba:  California: 
Uninsured Population under 64	Percentage of population under age 65 without health insurance.	9.0%	7.8%	8.3%	Sutter:  Yuba:  California: 
Income Inequality	Ratio of household income at the 80th percentile to income at the 20th percentile.	4.5	4.5	5.2	Sutter:  Yuba:  California: 

## Physical Environment

Table 14: County physical environment indicators compared to state benchmarks.

Indicators	Description	Sutter	Yuba	California	
<b>Housing</b>					
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen facilities, or lack of plumbing facilities.	20.6%	21.8%	26.4%	Sutter:  Yuba:  California: 
Severe Housing Cost Burden	Percentage of households that spend 50% or more of their household income on housing.	14.0%	15.3%	19.7%	Sutter:  Yuba:  California: 
Homeownership	Percentage of occupied housing units that are owned.	57.7%	60.5%	54.8%	Sutter:  Yuba:  California: 

Indicators	Description	Sutter	Yuba	California	
Homelessness Rate	Number of homeless individuals per 100,000 population.	418.0	418.0	411.2	Sutter:  Yuba:  California: 
<b>Transit</b>					
Households with no Vehicle Available	Percentage of occupied housing units that have no vehicles available.	6.1%	6.5%	7.1%	Sutter:  Yuba:  California: 
Long Commute - Driving Alone	Among workers who commute in their car alone, the percentage that commute more than 30 minutes.	33.8%	44.2%	42.2%	Sutter:  Yuba:  California: 
Access to Public Transit	Percentage of population living near a fixed public transportation stop	58.9%	59.3%	69.6%	Sutter:  Yuba:  California: 
<b>Air and Water Quality</b>					
Pollution Burden Percent	Percentage of population living in a census tract with a CalEnviroScreen 3.0 pollution burden score percentile of 50 or greater	52.2%	53.2%	51.6%	Sutter:  Yuba:  California: 
Air Pollution - Particulate Matter	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5).	8.1	8.6	8.1	Sutter:  Yuba:  California: 
Drinking Water Violations	Presence of health-related drinking water violations in the county.	Yes	Yes		Sutter:  Yuba:  California:



## Community Service Provider Survey Results

Table 15: Service provider survey results for the AHRO/SSHNV service area.

Service Provider Survey Snapshot   Sutter and Yuba Counties (N=16)	
Most Frequently Reported Health Needs	% Reporting
Access to Mental/Behavioral Health and Substance Use Services	87.5
Active Living and Healthy Eating	75.0
Access to Basic Needs Such as Housing, Jobs, and Food	68.8
Access to Specialty and Extended Care	62.5
A Healthy Physical Environment	56.3
Injury and Disease Prevention and Management	56.3
Top 3/ Priority (Most Frequently Reported Characteristics)	
Access to Mental/Behavioral Health and Substance Use Services	68.8
<ul style="list-style-type: none"> <li>• <i>There aren't enough mental health providers or treatment centers in the area (e.g., psychiatric beds, therapists, support groups).</i></li> <li>• <i>Substance use is a problem in the area (e.g., use of opiates and methamphetamine, prescription misuse).</i></li> <li>• <i>Additional services for those who are homeless and experiencing mental/behavioral health issues are needed.</i></li> </ul>	
Access to Basic Needs Such as Housing, Jobs, and Food	43.8
<ul style="list-style-type: none"> <li>• <i>Lack of affordable housing is a significant issue in the area.</i></li> <li>• <i>The area needs additional low-income housing options.</i></li> <li>• <i>Many people in the area do not make a living wage.</i></li> <li>• <i>Poverty in the county is high.</i></li> </ul>	
Active Living and Healthy Eating	37.5
<ul style="list-style-type: none"> <li>• <i>The community needs nutrition education programs.</i></li> <li>• <i>There are food deserts in the area where fresh, unprocessed foods are not available.</i></li> </ul>	

## CHNA Methods and Processes

Two related models were foundational in this CHNA. 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 federal regulations for conducting hospital CHNAs.

### Conceptual Model

The conceptual model used in this needs assessment is shown in Figure 8. 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.

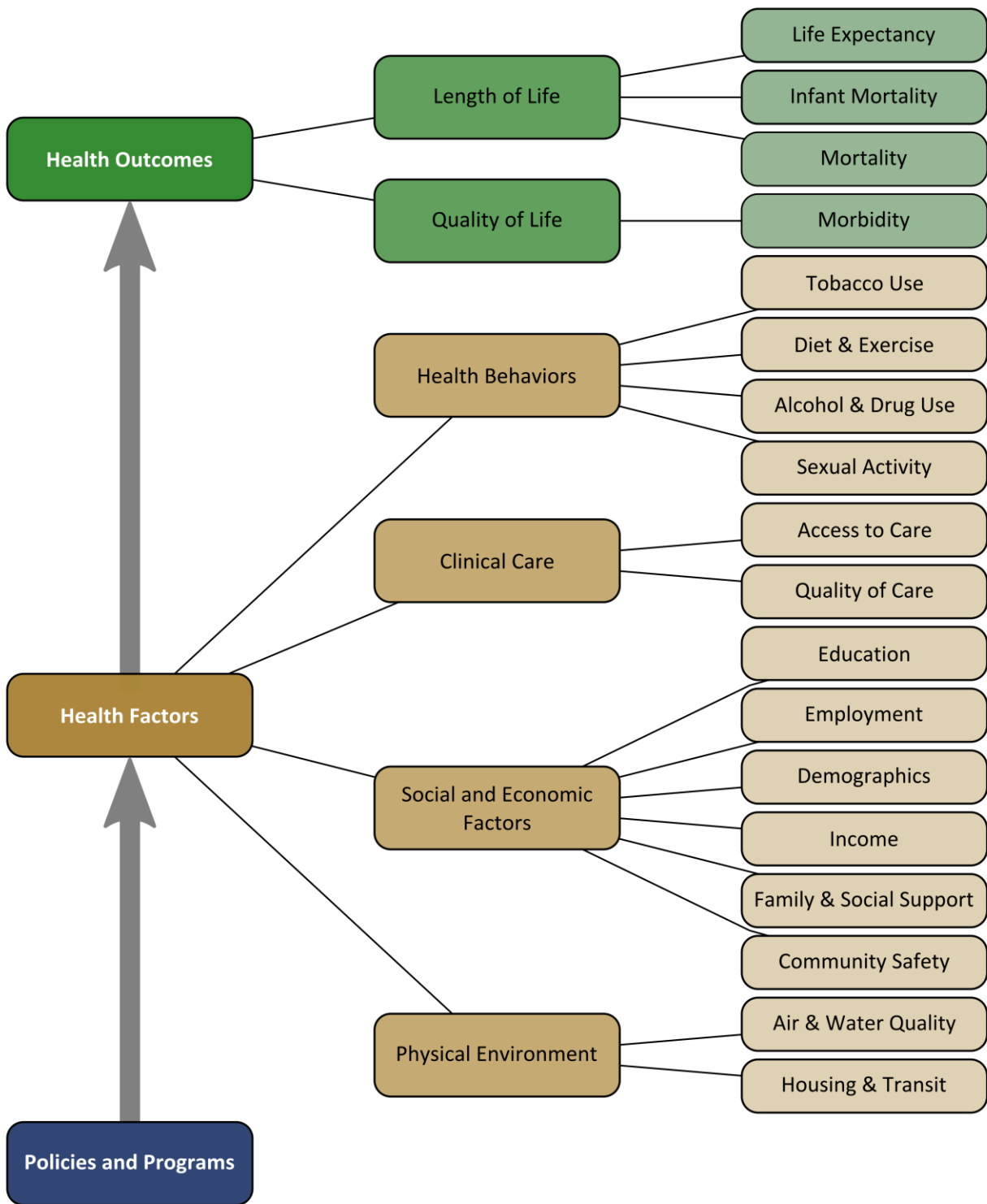


Figure 8: Community Health Assessment Conceptual Model as modified from the County Health Rankings Model, Robert Wood Johnson Foundation, and University of Wisconsin, 2015.

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 the service area 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 primarily 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, each conceptual model category was reviewed to identify potential indicators that could be used to fully represent the category. The results of this discussion were then used to guide secondary data collection.

### *Process Model*

Figure 9 outlines the data collection and analysis stages of this process. The project began by confirming the HSA for each participating hospital for which the CHNA would be conducted. Primary data collection included key informant interviews and focus groups with community health experts and residents as well as a community survey provider survey. Initial key informant interviews were used to identify Communities of Concern which are areas or population subgroups within the county experiencing health disparities.

Overall primary and secondary data were integrated to identify significant health needs for the HSA. 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. An evaluation of the impact of the hospitals’ prior efforts was obtained from hospital representatives and any 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.

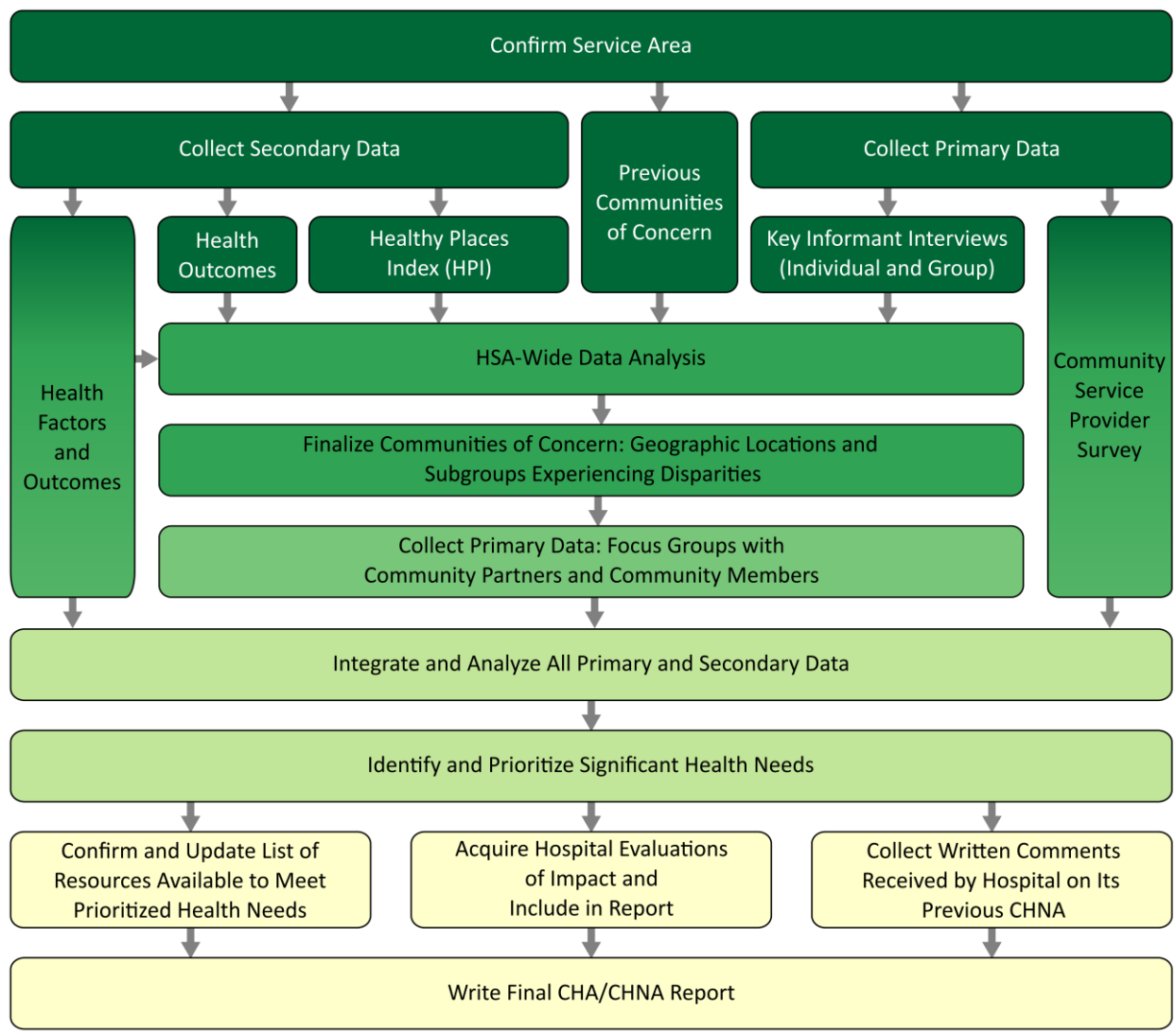


Figure 9: CHNA process model.

## Primary Data Collection and Processing

### Primary Data Collection

Input from the community served was collected through two 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 that were identified as populations experiencing disparities.

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 for involvement in the interview. All interview data were collected through note taking and, in some instances, recording.

## 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 service area, including input from the designated public health departments. Data from these area-wide informants, coupled with socio-demographic data, was 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. The interviewer asked each participant to verbally explain what vulnerable populations existed in the counties. As needed for a visual aid, key informants were provided a map of the HSA to directly point to the geographic locations of these vulnerable communities. Additional key informant interviews were focused on the geographic locations and/or subgroups identified in the earlier phase.

Table 16 contains a listing of community health experts, or key informants, that contributed input to the CHNA. The table describes the name of the represented organization, the number of participants and area of expertise, the populations served by the organization, and the date of the interview.

*Table 16: Key informant list.*

Organization	Date	Number of Participants	Area of Expertise	Populations Served
Sutter County Department of Public Health	01/03/2022	1	Public Health	Residents of Sutter County
Yuba County Health and Human Services Division	01/19/2022	1	Public Health	Residents of Yuba County
Yuba Sutter Healthcare Council	01/21/2022	10	Healthcare, advocacy, navigation	Residents of Sutter and Yuba Counties
Adventist Health and Rideout Staff	01/26/2022	9	Acute Care Hospital	Residents of Sutter and Yuba Counties
Peach Tree Health	02/07/2022	1	Healthcare provider	Low income, at-risk residents of Yuba and Sutter Counties
Harmony Health	02/08/2022	1	Healthcare provider	Low income, at-risk, minority residents in Linda and Yuba City
Sutter Care at Home	02/09/2022	2	Home health, hospice	Residents of Sutter and Yuba Counties
Sutter Medical Foundation	02/11/2022	1	Health care provider	Children and adolescents of Sutter and Yuba Counties
Anthem Blue Cross (Medi-Cal payer)	02/15/2022	1	Medical coverage	Sutter and Yuba Counties; Medi-Cal recipients
Sutter County Board of Supervisors	03/08/2022	1	Policy and advocacy	All residents of Sutter County; Punjabi community

## Key Informant Interview Guide

The following questions served as the interview guides for key informant interviews.

### 2022 CHNA Group/Key Informant Interview Protocol

1. **BACKGROUND**
  - a) **Please tell me about your current role and the organization you work for?**
    - i. Probe for:
      1. Public health (division or unit)
      2. Hospital health system
      3. Local non-profit
      4. Community member
  - b) **How would you define the community (ies) you or your organization serves?**
    - i. Probe for:
      1. Specific geographic areas?
      2. Specific populations served?
      3. *Who? Where? Racial/ethnic make-up, physical environment (urban/rural, large/small)*
2. **CHARACTERISTICS OF A HEALTHY COMMUNITY**
  - a) **In your view, what does a healthy community look like?**
    - i. Probe for:
      1. Social factors
      2. Economic factors
      3. Clinical care
      4. Physical/built environment (food environment, green spaces)
      5. Neighborhood safety
3. **HEALTH ISSUES**
  - a) **What would you say are the biggest health needs in the community?**
    - i. Probe for:
      1. How has the presence of COVID-19 impacted these health needs?
  - b) **INSERT MAP exercise: Please use the map provided to help our team understand where communities that experience the greatest health disparities live?**
    - i. 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?
4. **CHALLENGES/BARRIERS**
  - a) **Looking through the lens of equity, what are the challenges (barriers or drivers) to being healthy for the community as a whole?**
    - i. **Do these inequities exist among certain population groups?**
    - ii. Probe for:
      1. Health Behaviors (maladaptive, coping)
      2. Social factors (social connections, family connectedness, relationship with law enforcement)
      3. Economic factors (income, access to jobs, affordable housing, affordable food)

4. Clinical Care factors (access to primary care, secondary care, quality of care)
  5. Physical (Built) environment (safe and healthy housing, walkable communities, safe parks)
5. **SOLUTIONS**
- a. **What solutions are needed to address the health needs and or challenges mentioned?**
    - i. Probe for:
      1. Policies
      2. Care coordination
      3. Access to care
      4. Environmental change
6. **PRIORITY**
- a. **Which would you say are currently the most important or urgent health issues or challenges to address (at least 3 to 5) in order to improve the health of the community?**
7. **RESOURCES**
- a. **What resources exist in the community to help people live healthy lives?**
    - i. Probe for:
      1. Barriers to accessing these resources.
      2. New resources that have been created since 2019
      3. New partnerships/projects/funding
8. **PARTICIPANT DRIVEN SAMPLING:**
- a. **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?
9. **OPEN: Is there anything else you would like to share with our team about the health of the community?**

### *Focus Group Results*

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

Table 17 contains a listing of community resident groups that contributed input to the CHNA. The table describes the hosting organization of the focus group, the date it occurred, the total number of participants, and population represented for focus group members.

*Table 17: Focus group list.*

Hosting Organization	Date	Number of Participants	Populations Represented
First 5 Yuba County	02/28/2022	4	Families, low income, Spanish speaking

Hosting Organization	Date	Number of Participants	Populations Represented
Western Farm Workers Association	03/17/2022	3	Farmer laborers
Sutter Yuba Homeless Consortium	03/17/2022	3	Homeless

*Focus Group Interview Guide*

The following questions served as the interview guides for focus group interviews.

**2022 CHNA Focus Group Interview Protocol**

1. Let’s start by introducing ourselves. Please tell us your name, the town you live in, and one thing that you are proud of about your community.
2. We would like to hear about the community where you live. Tell us in a few words what you think of as “your community”. What it is like to live in your community?
3. What do you think that a “healthy environment” is?
4. When thinking about your community based on the healthy environment you just described, what are the biggest health needs in your community?
5. Are needs more prevalent in a certain geographic area, or within a certain group of the community?
6. How has the presence of COVID-19 impacted these health needs?
7. What are the challenges or barriers to being healthy in your community?
8. What are some solutions that can help solve the barriers and challenges you talked about?
9. Based on what we have discussed so far, what are currently the most important or urgent top 3 health issues or challenges to address to improve the health of the community?
10. Are these needs that have recently come up or have they been around for a long time?
11. What are resources that exist in the community that help your community live healthy lives and address the health issues and inequity we have discussed?
12. Is there anything else you would like to share with our team about the health of the community?

*Primary Data Processing*

Key informant and focus group data were analyzed using qualitative analytic software. 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.

**Community Service Provider Survey**

A web-based survey was administered to community service providers (CSP) who delivered health and social services to community residents of the HSA. A list of CSPs affiliated with the nonprofit hospitals included in this report was used as an initial sampling frame. An email recruitment message was sent to these CSPs detailing the survey aims and inviting them to participate. Participants we also encouraged to forward the recruitment message to other CSPs in their networks. The survey was designed using



Qualtrics, an online survey platform, and was available for approximately two weeks. 16 respondents completed the survey. Survey respondents were also given the opportunity to be acknowledged for their participation in the report and are listed as follows:

Johnny Burke, Lesia Chase, Meredith Evans, Neil Goforth, Bob Harlan, Eric Hernandez, Steve Kroeger, John Nicoletti, Lisa Stark, Greg Stone, and Ericka Summers

After providing socio-demographic information including the county they served and their affiliated organization(s), survey respondents were shown a list of 12 potential health needs and asked to identify which were unmet health needs in their community. In order to reduce any confusion or ambiguity that could introduce bias, participants could scroll over each health need for a definition. Respondents were then asked to select which of the needs they identified as unmet in their community were the priority to address (up to three health needs). Upon selection of these priority unmet health needs, respondents were asked about the characteristics of each as it is expressed in their community. Depending upon the specific health need, respondents were shown a list of between 7-12 characteristics and could select all that apply. Respondents were also offered the opportunity to provide additional information about the health need in their community if it was not provided as a response option. Finally, we included a set of questions about how the COVID-19 pandemic impacted the health needs of the community.

When the survey period was over, incomplete and duplicate responses were removed from the dataset and the survey responses were double-checked for accuracy. Descriptive statistics and frequencies were used to summarize the health needs. This information was used along with other data sources to both identify and rank significant health needs in the community, and to describe how the health needs are expressed.

## **Secondary Data Collection and Processing**

We use “secondary data” to refer to those quantitative variables used in this analysis that were obtained from third party sources. Secondary data were used to 1) inform the identification of Communities of Concern, 2) support the identification of health needs within the HSA. This section details the data sources and processing steps used to obtain the secondary data used in each of these steps and prepare them for analysis.

### ***Community of Concern Identification Datasets***

Two main secondary data sources were used in the identification of Communities of Concern: California Healthy Places Index (HPI),<sup>15</sup> derived from health factor indicators available at the US Census tract level, and mortality data from the California Department of Public Health (CDPH),<sup>16</sup> health outcome indicators available at the ZIP Code level. The CDPH mortality data reports the number of deaths that occurred in each ZIP Code from 2015-2019 due to each of the causes listed in Table 18.

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<sup>15</sup> Public Health Alliance of Southern California. 2021. HPI\_MasterFile\_2021-04-22.zip. Data file. Retrieved 1 May 2021 from [https://healthyplacesindex.org/wp-content/uploads/2021/04/HPI\\_MasterFile\\_2021-04-22.zip](https://healthyplacesindex.org/wp-content/uploads/2021/04/HPI_MasterFile_2021-04-22.zip).

<sup>16</sup> State of California, Department of Public Health. 2021. California Comprehensive Master Death File (Static), 2015-2019.

Table 18: Mortality indicators used in Community of Concern Identification.

Cause of Death	ICD 10 Codes
Alzheimer's disease	G30
Malignant neoplasms (cancers)	C00-C97
Chronic lower respiratory disease (CLRD)	J40-J47
Diabetes mellitus	E10-E14
Diseases of heart	I00-I09, I11, I13, I20-I51
Essential hypertension and hypertensive renal disease	I10, I12, I15
Accidents (unintentional injuries)	V01-X59, Y85-Y86
Chronic liver disease and cirrhosis	K70, K73-K74
Nephritis, nephrotic syndrome and nephrosis	N00-N07, N17-N19, N25-N27
Pneumonia and influenza	J09-J18
Cerebrovascular disease (stroke)	I60-I69
Intentional self-harm (suicide)	*U03, X60-X84, Y87.0

While the HPI dataset was used as-is, additional processing was required to prepare the mortality data for analysis. This included two main steps. First, ZIP Codes associated with PO Boxes needed to be merged with the larger ZIP Codes in which they were located. Once this was completed, smoothed mortality rates were calculated for each resulting ZIP Code.

### ZIP Code Consolidation

The mortality indicators used here included deaths reported for the ZIP Code at the decedent's place of residence. 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 (the main source of population and demographic data in the United States) to report population. 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 ZIP Code Tabulation Areas (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 make it possible to calculate mortality 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 corresponding ZCTA. But residents whose mailing addresses are associated with 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<sup>17</sup> were compared to ZCTA boundaries.<sup>18</sup> 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.

### *Rate Calculation and Smoothing*

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.<sup>19</sup> Smoothed rates are considered preferable to raw rates for two main reasons. First, the small population of many ZCTAs 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 2017 American Community Survey 5-year Estimates table B03002. Data for 2017 were used because this represented the central year of the 2015–2019 range of years for which CDPH data were collected. The population data for 2017 were multiplied by five to match the five years of mortality data used to calculate smoothed rates. The smoothed mortality rates were then multiplied by 100,000 so that the final rates represented deaths per 100,000 people.

### *Significant Health Need Identification Dataset*

The second main set of data used in the CHNA includes the health factor and health outcome indicators used to identify 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.

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<sup>17</sup> Datasheer, L.L.C. 2018. ZIP Code Database Free. Retrieved 16 Jul 2018 from <http://www.Zip-Codes.com>.

<sup>18</sup> US Census Bureau. 2021. TIGER/Line Shapefile, 2019, 2010 nation, U.S., 2010 Census 5-Digit ZIP Code Tabulation Area (ZCTA5) National. Retrieved 9 Feb 2021 from <https://www.census.gov/cgi-bin/geo/shapefiles/index.php>.

<sup>19</sup> Anselin, Luc. 2003. Rate Maps and Smoothing. Retrieved 14 Jan 2018 from [http://www.dpi.inpe.br/gilberto/tutorials/software/geoda/tutorials/w6\\_rates\\_slides.pdf](http://www.dpi.inpe.br/gilberto/tutorials/software/geoda/tutorials/w6_rates_slides.pdf)

Table 19: Health factor and health outcome indicators used in health need identification.

Conceptual Model Alignment		Indicator	Data Source	Time Period		
Health Outcomes	Length of Life	Infant Mortality	Infant Mortality	County Health Rankings	2013 - 2019	
		Life Expectancy	Child Mortality	Child Mortality	County Health Rankings	2016 - 2019
			Life Expectancy	Life Expectancy	County Health Rankings	2017 - 2019
			Premature Age-Adjusted Mortality	Premature Age-Adjusted Mortality	County Health Rankings	2017 - 2019
			Premature Death	Premature Death	County Health Rankings	2017 - 2019
			Stroke Mortality	Stroke Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Chronic Lower Respiratory Disease Mortality	Chronic Lower Respiratory Disease Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Diabetes Mortality	Diabetes Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Heart Disease Mortality	Heart Disease Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Hypertension Mortality	Hypertension Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
	Life Expectancy	Cancer Mortality	Cancer Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019	
		Liver Disease Mortality	Liver Disease Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019	
		Kidney Disease Mortality	Kidney Disease Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019	
		Suicide Mortality	Suicide Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019	
		Unintentional Injuries Mortality	Unintentional Injuries Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019	
		COVID-19 Mortality	COVID-19 Mortality	CDPH COVID-19 Time-Series Metrics by County and State	Collected on 2022-03-23	
		COVID-19 Case Fatality	COVID-19 Case Fatality	CDPH COVID-19 Time-Series Metrics by County and State	Collected on 2022-03-23	
		Alzheimer's Disease Mortality	Alzheimer's Disease Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019	
		Influenza and Pneumonia Mortality	Influenza and Pneumonia Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019	

Conceptual Model Alignment			Indicator	Data Source	Time Period
Quality of Life	Morbidity	Diabetes Prevalence	County Health Rankings	2017	
		Low Birthweight	County Health Rankings	2013 - 2019	
		HIV Prevalence	County Health Rankings	2018	
		Disability	2019 American Community Survey 5 year estimate variable S1810_C03_001E	2015 - 2019	
		Poor Mental Health Days	County Health Rankings	2018	
		Frequent Mental Distress	County Health Rankings	2018	
		Poor Physical Health Days	County Health Rankings	2018	
		Frequent Physical Distress	County Health Rankings	2018	
		Poor or Fair Health	County Health Rankings	2018	
		Colorectal Cancer Prevalence	California Cancer Registry	2013 - 2017	
		Breast Cancer Prevalence	California Cancer Registry	2013 - 2017	
		Lung Cancer Prevalence	California Cancer Registry	2013 - 2017	
		Prostate Cancer Prevalence	California Cancer Registry	2013 - 2017	
		COVID-19 Cumulative Incidence	CDPH COVID-19 Time-Series Metrics by County and State	Collected on 2022-03-23	
		Asthma ED Rates	Tracking California	2018	
		Asthma ED Rates for Children	Tracking California	2018	
		Health Factors	Alcohol and Drug Use	Excessive Drinking	County Health Rankings
Drug Induced Death	CDPH 2021 County Health Status Profiles			2017 - 2019	
Diet and Exercise	Adult Obesity		County Health Rankings	2017	
	Physical Inactivity		County Health Rankings	2017	
	Limited Access to Healthy Foods		County Health Rankings	2015	
	Food Environment Index		County Health Rankings	2015 & 2018	
	Access to Exercise Opportunities		County Health Rankings	2010 & 2019	
Sexual Activity	Chlamydia Incidence		County Health Rankings	2018	

Conceptual Model Alignment		Indicator	Data Source	Time Period
		Teen Birth Rate	County Health Rankings	2013 - 2019
	Tobacco Use	Adult Smoking	County Health Rankings	2018
Clinical Care	Access to Care	Primary Care Shortage Area	U.S. Heath Resources and Services Administration	2021
		Dental Care Shortage Area	U.S. Heath Resources and Services Administration	2021
		Mental Health Care Shortage Area	U.S. Heath Resources and Services Administration	2021
		Medically Underserved Area	U.S. Heath Resources and Services Administration	2021
		Mammography Screening	County Health Rankings	2018
		Dentists	County Health Rankings	2019
		Mental Health Providers	County Health Rankings	2020
		Psychiatry Providers	County Health Rankings	2020
		Specialty Care Providers	County Health Rankings	2020
		Primary Care Providers	County Health Rankings	2018; 2020
	Quality Care	Preventable Hospitalization	California Office of Statewide Health Planning and Development Prevention Quality Indicators for California	2019
COVID-19 Cumulative Full Vaccination Rate		CDPH COVID-19 Vaccine Progress Dashboard Data	Collected on 2022-03-23	
Socio-Economic and Demographic Factors	Community Safety	Homicide Rate	County Health Rankings	2013 - 2019
		Firearm Fatalities Rate	County Health Rankings	2015 - 2019
		Violent Crime Rate	County Health Rankings	2014 & 2016
		Juvenile Arrest Rate	Criminal Justice Data: Arrests, OpenJustice, California Department of Justice	2015 - 2019
		Motor Vehicle Crash Death	County Health Rankings	2013 - 2019

Conceptual Model Alignment		Indicator	Data Source	Time Period	
		Education	Some College	County Health Rankings	2015 - 2019
			High School Completion	County Health Rankings	2015 - 2019
			Disconnected Youth	County Health Rankings	2015 - 2019
			Third Grade Reading Level	County Health Rankings	2018
			Third Grade Math Level	County Health Rankings	2018
		Employment	Unemployment	County Health Rankings	2019
		Family and Social Support	Children in Single-Parent Households	County Health Rankings	2015 - 2019
			Social Associations	County Health Rankings	2018
			Residential Segregation (Non-White/White)	County Health Rankings	2015 - 2019
		Income	Children Eligible for Free Lunch	County Health Rankings	2018 - 2019
			Children in Poverty	County Health Rankings	2019
			Median Household Income	County Health Rankings	2019
			Uninsured Population under 64	County Health Rankings	2018
			Income Inequality	County Health Rankings	2015 - 2019
		Physical Environment	Housing and Transit	Severe Housing Problems	County Health Rankings
	Severe Housing Cost Burden			County Health Rankings	2015 - 2019
	Homeownership			County Health Rankings	2015 - 2019
	Homelessness Rate			US Dept. of Housing and Urban Development 2020 Annual Homeless Assessment Report	2020
	Households with no Vehicle Available			2019 American Community Survey 5-year estimate variable DP04_0058PE	2015 - 2019
	Long Commute - Driving Alone			County Health Rankings	2015 - 2019

Conceptual Model Alignment		Indicator	Data Source	Time Period
		Access to Public Transit	OpenMobilityData, Transitland, TransitWiki.org, Santa Ynez Valley Transit; US Census Bureau	2021; 2020
	Air and Water Quality	Pollution Burden Percent	California Office of Environmental Health Hazard Assessment	2018
		Air Pollution - Particulate Matter	County Health Rankings	2016
		Drinking Water Violations	County Health Rankings	2019

The following sections give further details about the sources of these data and any processing applied to prepare them for use in the analysis.

### *County Health Rankings Data*

All indicators listed with County Health Rankings (CHR) as their source were obtained from the 2021 County Health Rankings<sup>20</sup> dataset. This was the most common source of data, with 52 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 service area. 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: Sources and time periods for indicators obtained from County Health Rankings.*

CHR Indicator	Time Period	Data Source
Infant Mortality	2013 - 2019	National Center for Health Statistics - Mortality Files
Child Mortality	2016 - 2019	National Center for Health Statistics - Mortality Files
Life Expectancy	2017 - 2019	National Center for Health Statistics - Mortality Files
Premature Age-Adjusted Mortality	2017 - 2019	National Center for Health Statistics - Mortality Files
Premature Death	2017 - 2019	National Center for Health Statistics - Mortality Files
Diabetes Prevalence	2017	United States Diabetes Surveillance System

<sup>20</sup> University of Wisconsin Population Health Institute. 2021. County Health Rankings State Report 2021. Retrieved 6 May 2021 from <https://www.countyhealthrankings.org/app/oregon/2021/downloads> and <https://www.countyhealthrankings.org/app/california/2021/downloads>.



CHR Indicator	Time Period	Data Source
Low Birthweight	2013 - 2019	National Center for Health Statistics - Natality files
HIV Prevalence	2018	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Poor Mental Health Days	2018	Behavioral Risk Factor Surveillance System
Frequent Mental Distress	2018	Behavioral Risk Factor Surveillance System
Poor Physical Health Days	2018	Behavioral Risk Factor Surveillance System
Frequent Physical Distress	2018	Behavioral Risk Factor Surveillance System
Poor or Fair Health	2018	Behavioral Risk Factor Surveillance System
Excessive Drinking	2018	Behavioral Risk Factor Surveillance System
Adult Obesity	2017	United States Diabetes Surveillance System
Physical Inactivity	2017	United States Diabetes Surveillance System
Limited Access to Healthy Foods	2015	USDA Food Environment Atlas
Food Environment Index	2015 & 2018	USDA Food Environment Atlas, Map the Meal Gap from Feeding America
Access to Exercise Opportunities	2010 & 2019	Business Analyst, Delorme map data, ESRI, & US Census Tigerline Files
Chlamydia Incidence	2018	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Teen Birth Rate	2013 - 2019	National Center for Health Statistics - Natality files
Adult Smoking	2018	Behavioral Risk Factor Surveillance System
Mammography Screening	2018	Mapping Medicare Disparities Tool
Dentists	2019	Area Health Resource File/National Provider Identification file
Mental Health Providers	2020	CMS, National Provider Identification
Psychiatry Providers	2020	Area Health Resource File
Specialty Care Providers	2020	Area Health Resource File
Primary Care Providers	2018; 2020	Area Health Resource File/American Medical Association; CMS, National Provider Identification
Homicide Rate	2013 - 2019	National Center for Health Statistics - Mortality Files
Firearm Fatalities Rate	2015 - 2019	National Center for Health Statistics - Mortality Files
Violent Crime Rate	2014 & 2016	Uniform Crime Reporting - FBI
Motor Vehicle Crash Death	2013 - 2019	National Center for Health Statistics - Mortality Files
Some College	2015 - 2019	American Community Survey, 5-year estimates
High School Completion	2015 - 2019	American Community Survey, 5-year estimates
Disconnected Youth	2015 - 2019	American Community Survey, 5-year estimates
Third Grade Reading Level	2018	Stanford Education Data Archive

CHR Indicator	Time Period	Data Source
Third Grade Math Level	2018	Stanford Education Data Archive
Unemployment	2019	Bureau of Labor Statistics
Children in Single-Parent Households	2015 - 2019	American Community Survey, 5-year estimates
Social Associations	2018	County Business Patterns
Residential Segregation (Non-White/White)	2015 - 2019	American Community Survey, 5-year estimates
Children Eligible for Free Lunch	2018 - 2019	National Center for Education Statistics
Children in Poverty	2019	Small Area Income and Poverty Estimates
Median Household Income	2019	Small Area Income and Poverty Estimates
Uninsured Population under 64	2018	Small Area Health Insurance Estimates
Income Inequality	2015 - 2019	American Community Survey, 5-year estimates
Severe Housing Problems	2013 - 2017	Comprehensive Housing Affordability Strategy (CHAS) data
Severe Housing Cost Burden	2015 - 2019	American Community Survey, 5-year estimates
Homeownership	2015 - 2019	American Community Survey, 5-year estimates
Long Commute - Driving Alone	2015 - 2019	American Community Survey, 5-year estimates
Air Pollution - Particulate Matter	2016	Environmental Public Health Tracking Network
Drinking Water Violations	2019	Safe Drinking Water Information System

The provider rates for the primary care physicians and other primary care providers indicators obtained from CHR were summed to create the final primary care provider indicator used in this analysis.

### *California Department of Public Health*

#### *By-Cause Mortality Data*

By-cause mortality data were obtained at the county and state level from the CDPH Cal-ViDa<sup>21</sup> online data query system for the years 2015-2019. Empirically bayes smoothed rates (EBRs) were calculated for each mortality indicator using the total county population figure reported in the 2017 American Community Survey 5-year Estimates table B03002. Data for 2017 were used because this represented the central year of the 2015–2019 range of years for which CDPH data were collected. The population data for 2017 were multiplied by five to match the five years of mortality data used to calculate smoothed rates. The smoothed mortality rates were then multiplied by 100,000 so that the final rates represented deaths per 100,000 people.

<sup>21</sup> State of California, Department of Public Health. 2021. California Vital Data (Cal-ViDa), Death Query. Retrieved 1 Jun 2021 from <https://cal-vida.cdph.ca.gov/>.

CDPH masks the actual number of deaths that occur in a county for a given year and cause if there are between 1 and 10 total deaths recorded. Because of this, the following process was used to estimate the total number of deaths for counties whose actual values were masked. First, mortality rates for each cause and year were calculated for the state. The differences between the by-cause mortality for the state and the total by-cause mortality reported across all counties in the state for each cause and year were also calculated.

Next, we applied the state by-cause mortality rate for each cause and year to estimate mortality at the county level if the reported value was masked. This was done by multiplying the cause/year appropriate state-level mortality rate by the 2017 populations of counties with masked values. Resulting estimates that were less than 1 or greater than 10 were set to 1 and 10 respectively to match the known CDPH masking criteria.

The total number of deaths estimated for counties that had masked values for each year/cause was then compared to the difference between the reported total county and state deaths for the corresponding year/cause. If the number of estimated county deaths exceeded this difference, county estimates were further adjusted. This was done by iteratively ranking county estimates for a given year/cause, then from highest to lowest, reducing the estimates by 1 until they reached a minimum of 1 death. This continued until the estimated deaths for counties with masked values equaled the difference between the state and total reported county values.

### *COVID-19 Data*

Data on the cumulative number of cases and deaths<sup>22</sup> and completed vaccinations<sup>23</sup> for COVID-19 were used to calculate mortality, case-fatality, incidence, and vaccination rates. County mortality, incidence, and vaccination rates were calculated by dividing each of the respective values by the total population variable from the 2019 American Community Survey 5-year estimates table B01001, and then multiplying the resulting value by 100,000 to create rates per 100,000. Case-fatality rates were calculated by dividing COVID-19 mortality by the total number of cases, then multiplying by 100, representing the percentage of cases that ended in death.

### *Drug-Induced Deaths Data*

Drug-induced death rates were obtained from Table 19 of the 2021 County Health Status Profiles<sup>24</sup> and report age-adjusted deaths per 100,000.

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<sup>22</sup> State of California, Department of Public Health. 2021. Statewide COVID-19 Cases Deaths Tests. Retrieved March 23 2022 from [https://data.chhs.ca.gov/dataset/f333528b-4d38-4814-bebb-12db1f10f535/resource/046cdd2b-31e5-4d34-9ed3-b48cdbc4be7a/download/covid19cases\\_test.csv](https://data.chhs.ca.gov/dataset/f333528b-4d38-4814-bebb-12db1f10f535/resource/046cdd2b-31e5-4d34-9ed3-b48cdbc4be7a/download/covid19cases_test.csv).

<sup>23</sup> State of California, Department of Public Health. 2021. COVID-19 Vaccine Progress Dashboard Data. Retrieved March 23 2022 from <https://data.chhs.ca.gov/dataset/e283ee5a-cf18-4f20-a92c-ee94a2866ccd/resource/130d7ba2-b6eb-438d-a412-741bde207e1c/download/covid19vaccinesbycounty.csv>.

<sup>24</sup> State of California, Department of Public Health, Vital Records Data and Statistics. 2021. County Health Status Profiles 2021: CHSP 2021 Tables 1-29. Spreadsheet. Retrieved 21 Jul 2021 from [https://www.cdph.ca.gov/Programs/CHSI/CDPH%20Document%20Library/CHSP\\_2021\\_Tables\\_1-29\\_04.16.2021.xlsx](https://www.cdph.ca.gov/Programs/CHSI/CDPH%20Document%20Library/CHSP_2021_Tables_1-29_04.16.2021.xlsx).

## *U.S. Health Resources and Services Administration*

Indicators related to the availability of healthcare providers were obtained from the Health Resources and Services Administration<sup>25</sup> (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.

### *Health Professional Shortage Areas*

The health professional shortage area and medically underserved area data were not provided at the county level. Rather, they show 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.

### *Psychiatry and Specialty Care Providers*

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 non-federal, excluding hospital residents and those 75 years of age or older) from the total number of physicians (both MDs and DOs, patient care, non-federal) in 2018. This number was then divided by the 2018 total population given in the 2018 American Community Survey 5-year Estimates table B03002, 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, non-federal 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 obtained from the California Cancer Registry<sup>26</sup> 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 2013 to 2017, and report cases per 100,000. For low-

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<sup>25</sup> US Health Resources & Services Administration. 2021. Area Health Resources Files and Shortage Areas. Retrieved on 3 Feb 2021 from <https://data.hrsa.gov/data/download>.

<sup>26</sup> California Cancer Registry. 2021. Age-Adjusted Invasive Cancer Incidence Rates in California. Retrieved on 22 Jan 2021 from <https://www.cancer-rates.info/ca/>.

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.

### *Tracking California*

Data on emergency department visits rates for all ages as well as children aged 5 to 17 were obtained from Tracking California.<sup>27</sup> These data reported age-adjusted rates per 10,000. They were multiplied by 100 in this analysis to convert them to rates per 100,000 to make them more comparable to the standard used for other rate indicators.

### *US Census Bureau*

Data from the US Census Bureau was used for two additional indicators: the percentage of households with no vehicles available (table DPO4, variable 0058PE), and the percentage of the civilian non-institutionalized population with some disability (table S1810, variable C03\_001E). Values for both of these variables were obtained from the 2019 American Community Survey 5-year Estimates dataset.

### *California Office of Environmental Health Hazard Assessment*

Data used to calculate the pollution burden percent indicator were obtained from the CalEnviroScreen 3.0<sup>28</sup> dataset produced by the California Office of Environmental Health Hazard Assessment. This indicator reports the percentage of the population within a given county, or within the state as a whole, that live in a US Census tract with a CalEnviroScreen 3.0 Pollution Burden score in the 50th percentile or higher. Data on total population came from Table B03002 from the 2019 American Community Survey 5-year Estimates dataset.

### *California Department of Health Care Access and Information*

Data on preventable hospitalizations were obtained from the California Department of Health Care Access and Information (formerly Office of Statewide Health Planning and Development) Prevention Quality Indicators.<sup>29</sup> These data are reported as risk-adjusted rates per 100,000.

### *California Department of Justice*

Data reporting the total number of juvenile felony arrests was obtained from the California Department of Justice.<sup>30</sup> This indicator reports the rate of felony arrests per 1,000 juveniles under the age of 18. It was calculated by dividing the total number of juvenile felony arrests for each county or state from 2015

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<sup>27</sup> Tracking California, Public Health Institute. 2021. Asthma Related Emergency Department & Hospitalization data. Retrieved on 24 Jun 2021 from [www.trackingcalifornia.org/asthma/query](http://www.trackingcalifornia.org/asthma/query).

<sup>28</sup> California Office of Environmental Health Hazard Assessment. 2018. CalEnviroScreen 3.0. Retrieved on 22 Jan 2021 from <https://oehha.ca.gov/calenviroscreen/maps-data>.

<sup>29</sup> Office of Statewide Health Planning and Development. 2021. Prevention Quality Indicators (PQI) for California. Data files for Statewide and County. Retrieved 12 Mar 2021 from <https://oshpd.ca.gov/data-and-reports/healthcare-quality/ahrq-quality-indicators/>.

<sup>30</sup> California Department of Justice, OpenJustice. 2021. Criminal Justice Data: Arrests. Retrieved 17 Jun 2021 from <https://data-openjustice.doj.ca.gov/sites/default/files/dataset/2020-07/OnlineArrestData1980-2019.csv>.

- 2019 by the total population under 18 as reported in Table B01001 in the 2017 American Community Survey 5-year Estimates program. Population data from 2017 were used as this was the central year of the period over which juvenile felony arrest data were obtained. Population figures from 2017 were multiplied by 5 to match the years of arrest data used. Empirical bayes smoothed rates were calculated to increase the reliability of rates calculated for small counties. Finally, juvenile felony arrest rates were also calculated for Black, White, and Hispanic populations following the same manner, but using input population data from 2017 American Community Survey 5-year Estimates Tables B01001H, B01001B, and B01001I respectively.

### *US Department of Housing and Urban Development*

Data from the US Department of Housing and Urban Development's 2020 Annual Homeless Assessment Report<sup>31</sup> were used to calculate homelessness rates for the counties and state. This data reported point-in-time (PIT) homelessness estimates for individual Continuum of Care (CoC) organizations across the state. Each CoC works within a defined geographic area, which could be a group of counties, an individual county, or a portion of a county.

To calculate county rates, CoC were first related to county boundaries. Rates for CoC that covered single counties were calculated by dividing the CoC PIT estimate by the county population. If a given county was covered by multiple CoC, their PIT was totaled and then divided by the total county population to calculate the rate. When a single CoC covered multiple counties, the CoC PIT was divided by the total of all included county populations, and the resulting rate was applied to each individual county.

Population data came from the total population value reported in Table B03002 from the 2019 American Community Survey 5-year Estimates dataset. Derived rates were multiplied by 100,000 to report rates per 100,000.

### *Proximity to Transit Stops*

The proximity to transit stops variable reports the percent of county and state population that lives in a US Census block located within 1/4 mile of a fixed transit stop. Two sets of information were needed in order to calculate this indicator: total population at the Census block level, and the location of transit stops. Likely due to delays in data releases stemming from the COVID-19 pandemic, the most recent Census block population data available at the time of the analysis was from the 2010 Decennial Census,<sup>32</sup> so this was the data used to represent the distribution of population for this indicator.

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<sup>31</sup> US Department of Housing and Urban Development. 2021. 2020 Annual Homeless Assessment Report: 2007 - 2020 Point-in-Time Estimates by CoC. Retrieved 14 Jul 2021 from <https://www.huduser.gov/portal/sites/default/files/xls/2007-2020-PIT-Estimates-by-CoC.xlsx>.

<sup>32</sup> US Census Bureau. 2011. Census Blocks with Population and Housing Counts. Retrieved 7 Jun 2021 from <https://www2.census.gov/geo/tiger/TIGER2010BLKPOP/HU/>.

Transit stop data were identified first by using tools in the TidyTransit<sup>33</sup> library for the R statistical programming language.<sup>34</sup> This was used to identify transit providers with stops located within 100 miles of the state boundaries. A search for transit stops for these agencies, as well as all other transit agencies in the state, was conducted by reviewing three main online sources: OpenMobilityData,<sup>35</sup> Transitland,<sup>36</sup> Transitwiki.org,<sup>37</sup> and Santa Ynez Valley Transit.<sup>38</sup> Each of these websites list public transit data that have been made public by transit agencies. Transit data from all providers that could be identified were downloaded, and fixed transit stop locations were extracted from them.

The sf<sup>39</sup> library in R was then used to calculate 1/4 mile (402.336 meter) buffers around each of these transit stops, and then to identify which Census blocks fell within these areas. The total population of all tracts within the buffer of the stops was then divided by the total population of each county or state to generate the final indicator value.

## Detailed Analytical Methodology

The collected and processed primary and secondary data were integrated in three main analytical stages. First, secondary health outcome and health factor data were combined with area-wide key informant interviews help identify Communities of Concern. These Communities of Concern could potentially include geographic regions as well as specific sub-populations bearing disproportionate health burdens. This information was used to focus the remaining interview and focus group collection efforts on those areas and subpopulations. Next, the resulting data, along with the results from the service provider survey, were combined with secondary health need identification data to identify significant health needs within the service area. Finally, primary data were used to prioritize those identified significant health needs. The specific details for these analytical steps are given in the following three sections.

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<sup>33</sup> Flavio Poletti, Daniel Herszenhut, Mark Padgham, Tom Buckley and Danton Noriega-Goodwin. 2021. tidytransit: Read, Validate, Analyze, and Map Files in the General Transit Feed Specification. R package version 1.0.0. Retrieved 10 Sep 2021 from <https://CRAN.R-project.org/package=tidytransit>.

<sup>34</sup> R Core Team (2021). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <https://www.R-project.org/>.

<sup>35</sup> OpenMobilityData. 2021. California, USA. Retrieved all feeds listed on 31 May to 1 June 2021 from <https://openmobilitydata.org/l/67-california-usa>.

<sup>36</sup> Transitland. 2021. Transitland Operators. Retrieved all operators with California locations on 31 May to 1 June 2021 from <https://www.transit.land/operators>.

<sup>37</sup> Transitwiki.org. 2021. List of publicly-accessible transportation data feeds: dynamic and others. Retrieved on 31 May to 1 June 2021 from [https://www.transitwiki.org/TransitWiki/index.php/Publicly-accessible\\_public\\_transportation\\_data#List\\_of\\_publicly-accessible\\_public\\_transportation\\_data\\_feeds:\\_dynamic\\_data\\_and\\_others](https://www.transitwiki.org/TransitWiki/index.php/Publicly-accessible_public_transportation_data#List_of_publicly-accessible_public_transportation_data_feeds:_dynamic_data_and_others).

<sup>38</sup> Santa Ynez Valley Transit. GTFS Files. Retrieved 1 Jun 2021 from [http://www.cityofsolvang.com/DocumentCenter/View/2756/syvt\\_gtfs\\_011921](http://www.cityofsolvang.com/DocumentCenter/View/2756/syvt_gtfs_011921).

<sup>39</sup> Pebesma, E., 2018. Simple Features for R: Standardized Support for Spatial Vector Data. The R Journal 10 (1), 439-446, <https://doi.org/10.32614/RJ-2018-009>.

### Community of Concern Identification

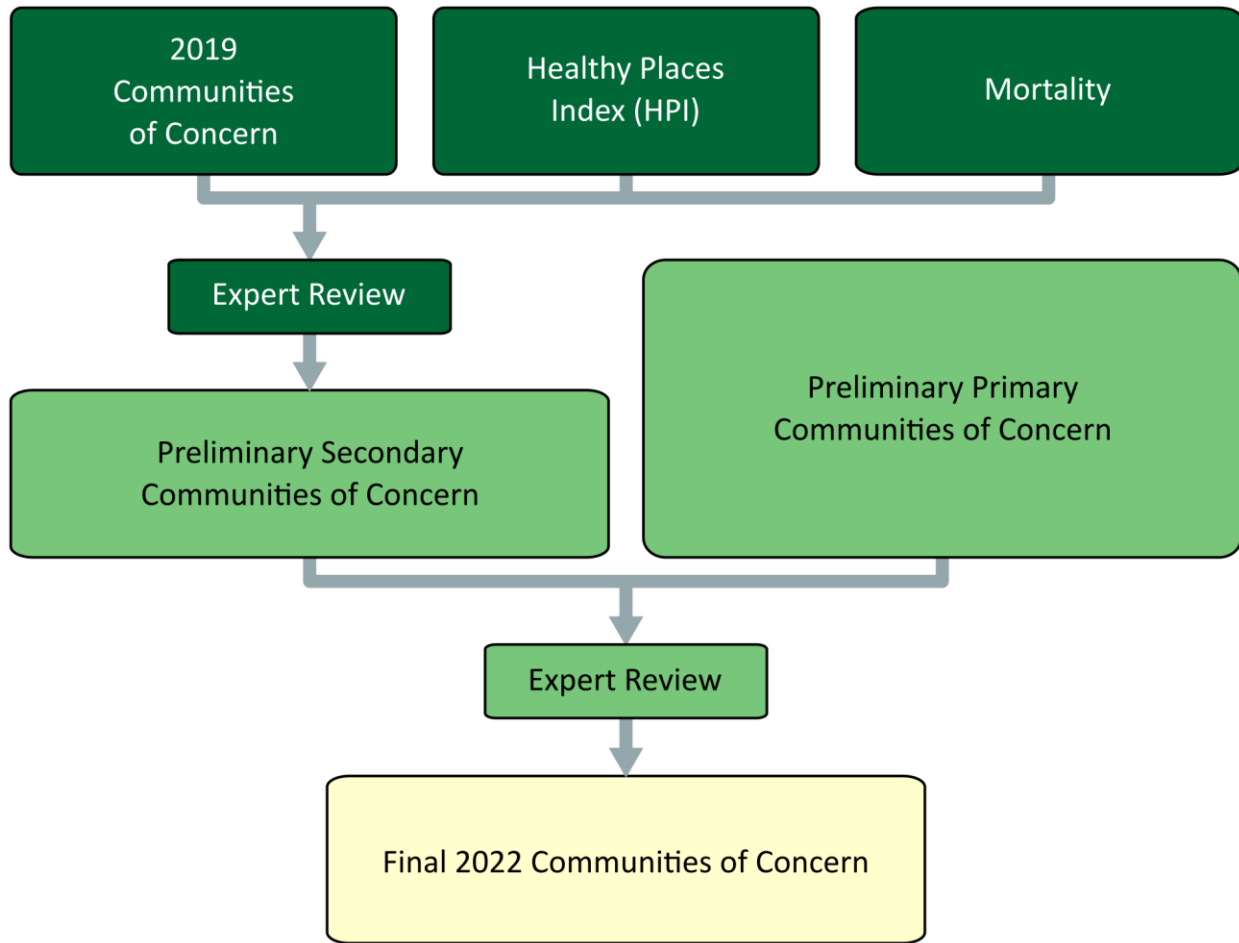


Figure 10: Community of Concern identification process.

As illustrated in Figure 10, 2022 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 2019 CHNA; the census tract-level California Healthy Places Index (HPI); and the CDPH ZCTA-level mortality data.

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

#### 2019 Community of Concern

A ZCTA was included if it was included in the 2019 CHNA Community of Concern list for the HSA. This was done to allow greater continuity between CHNA rounds and reflects the work of the hospital systems oriented to serve these disadvantaged communities.



### ***Healthy Places Index (HPI)***

A ZCTA was included if it intersected a census tract whose HPI value fell within the lowest 20% of those in the HSA. These census tracts represent areas with consistently high concentrations of demographic subgroups identified in the research literature as being more likely to experience health-related disadvantages.

### ***CDPH Mortality Data***

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. The number of times each ZCTA's rates for these indicators fell within the top 20% in the HSA was counted. Those ZCTAs whose counted values exceeded the 80th percentile for all of the ZCTAs in the HSA met the Community of Concern mortality selection criteria.

### ***Integration of Secondary Criteria***

Any ZCTA that met any of the three selection criteria (2019 Community of Concern, HPI, and Mortality) was reviewed for inclusion as a 2022 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 2022 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 2022 Communities of Concern.

### ***Significant Health Need Identification***

The general methods through which significant health needs (SHNs) were identified are shown in Figure 11 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 prior CHNAs among various hospitals throughout Central and Northern California and then supplementing this list based on a preliminary analysis of the primary qualitative data collected for the current CHNA. This resulted the list of PHNs shown in Table 21.

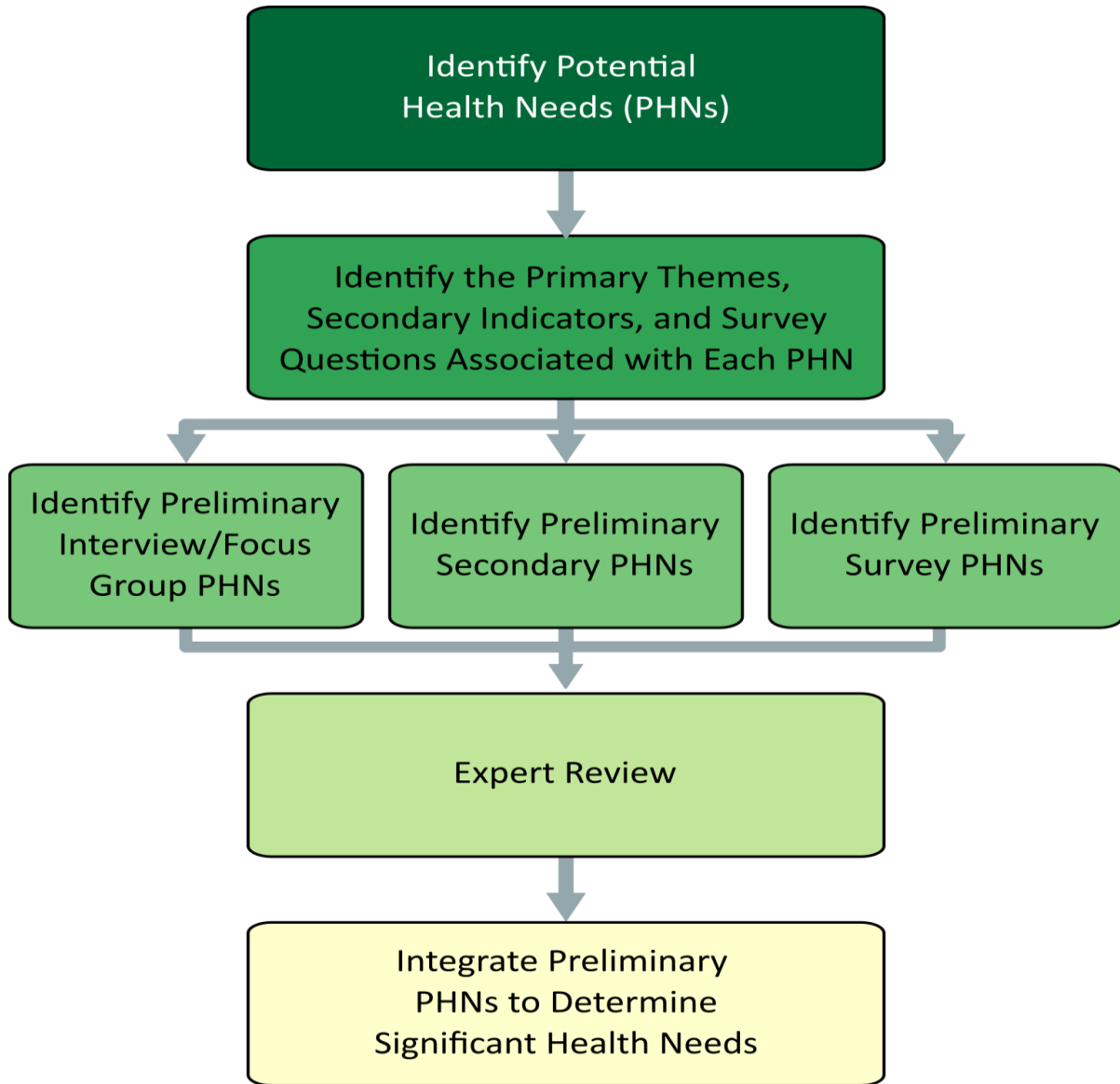


Figure 11: Significant health need identification process.

Table 21: 2022 Potential Health Needs.

Potential Health Needs (PHNs)	
PHN1	Access to Mental/Behavioral Health and Substance Use 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	Healthy Physical Environment
PHN7	Access to Basic Needs Such as Housing, Jobs, and Food
PHN8	Access to Functional Needs
PHN9	Access to Specialty and Extended Care
PHN10	Injury and Disease Prevention and Management

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Potential Health Needs (PHNs)

PHN11 Increased Community Connections

PHN12 System Navigation

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The next step in the process was to identify primary themes and secondary indicators associated with each of these health needs as shown in Tables 22 through 33. Primary theme associations were used to guide coding of the primary data sources to specific PHNs.

### Access to Mental/Behavioral Health and Substance Use Services

*Table 22: Primary themes and secondary indicators associated with PHN1.*

Primary Themes	Secondary Indicators
There aren't enough mental health providers or treatment centers in the area (e.g., psychiatric beds, therapists, support groups).	Life Expectancy
The cost for mental/behavioral health treatment is too high.	Premature Age-Adjusted Mortality
Treatment options in the area for those with Medi-Cal are limited.	Premature Death
Awareness of mental health issues among community members is low.	Liver Disease Mortality
Additional services specifically for youth are needed (e.g., child psychologists, counselors and therapists in the schools).	Suicide Mortality
The stigma around seeking mental health treatment keeps people out of care.	Poor Mental Health Days
Additional services for those who are homeless and dealing with mental/behavioral health issues are needed.	Frequent Mental Distress
The area lacks the infrastructure to support acute mental health crises.	Poor Physical Health Days
Mental/behavioral health services are available in the area, but people do not know about them.	Frequent Physical Distress
It's difficult for people to navigate for mental/behavioral healthcare.	Poor or Fair Health
Substance use is a problem in the area (e.g., use of opiates and methamphetamine, prescription misuse).	Excessive Drinking
There are too few substance use treatment services in the area (e.g., detox centers, rehabilitation centers).	Drug Induced Death
Substance use treatment options for those with Medi-Cal are limited.	Adult Smoking
There aren't enough services here for those who are homeless and dealing with substance use issues.	Primary Care Shortage Area
The use of nicotine delivery products such as e-cigarettes and tobacco is a problem in the community.	Mental Health Care Shortage Area
Substance use is an issue among youth in particular.	Medically Underserved Area
There are substance use treatment services available here, but people do not know about them.	Mental Health Providers
	Psychiatry Providers
	Firearm Fatalities Rate
	Juvenile Arrest Rate
	Disconnected Youth
	Social Associations
	Residential Segregation (Non-White/White)
	Income Inequality
	Severe Housing Cost Burden
	Homelessness Rate

## Access to Quality Primary Care Health Services

Table 23: Primary themes and secondary indicators associated with PHN2.

Primary Themes	Secondary Indicators
Insurance is unaffordable.	Infant Mortality
Wait-times for appointments are excessively long.	Child Mortality
Out-of-pocket costs are too high.	Life Expectancy
There aren't enough primary care service providers in the area.	Premature Age-Adjusted Mortality
Patients have difficulty obtaining appointments outside of regular business hours.	Premature Death
Too few providers in the area accept Medi-Cal.	Stroke Mortality
It is difficult to recruit and retain primary care providers in the region.	Chronic Lower Respiratory Disease Mortality
Specific services are unavailable here (e.g., 24-hour pharmacies, urgent care, telemedicine).	Diabetes Mortality
The quality of care is low (e.g., appointments are rushed, providers lack cultural competence).	Heart Disease Mortality
Patients seeking primary care overwhelm local emergency departments.	Hypertension Mortality
Primary care services are available, but are difficult for many people to navigate.	Cancer Mortality
	Liver Disease Mortality
	Kidney Disease Mortality
	COVID-19 Mortality
	COVID-19 Case Fatality
	Alzheimer's Disease Mortality
	Influenza and Pneumonia Mortality
	Diabetes Prevalence
	Low Birthweight
	Poor Mental Health Days
	Frequent Mental Distress
	Poor Physical Health Days
	Frequent Physical Distress
	Poor or Fair Health
	Colorectal Cancer Prevalence
	Breast Cancer Prevalence
	Lung Cancer Prevalence
	Prostate Cancer Prevalence
	Asthma ED Rates
	Asthma ED Rates for Children
	Primary Care Shortage Area
	Medically Underserved Area
	Mammography Screening
	Primary Care Providers
	Preventable Hospitalization
	COVID-19 Cumulative Full Vaccination Rate
	Residential Segregation (Non-White/White)
	Uninsured Population under 64

Primary Themes	Secondary Indicators
	Income Inequality
	Homelessness Rate

### Active Living and Healthy Eating

Table 24: Primary themes and secondary indicators associated with PHN3.

Primary Themes	Secondary Indicators
There are food deserts in the area where fresh, unprocessed foods are not available.	Life Expectancy
Fresh, unprocessed foods are unaffordable.	Premature Age-Adjusted Mortality
Food insecurity is an issue here.	Premature Death
Students need healthier food options in schools.	Stroke Mortality
The built environment doesn't support physical activity (e.g., neighborhoods aren't walk-able, roads aren't bike-friendly, or parks are inaccessible).	Diabetes Mortality
The community needs nutrition education programs.	Heart Disease Mortality
Homelessness in parks or other public spaces deters their use.	Hypertension Mortality
Recreational opportunities in the area are unaffordable (e.g., gym memberships, recreational activity programming).	Cancer Mortality
There aren't enough recreational opportunities in the area (e.g., organized activities, youth sports leagues)	Kidney Disease Mortality
The food available in local homeless shelters and food banks is not nutritious.	Diabetes Prevalence
Grocery store options in the area are limited.	Poor Mental Health Days
	Frequent Mental Distress
	Poor Physical Health Days
	Frequent Physical Distress
	Poor or Fair Health
	Colorectal Cancer Prevalence
	Breast Cancer Prevalence
	Prostate Cancer Prevalence
	Asthma ED Rates
	Asthma ED Rates for Children
	Adult Obesity
	Physical Inactivity
	Limited Access to Healthy Foods
	Food Environment Index
	Access to Exercise Opportunities
	Residential Segregation (Non-White/White)
	Income Inequality
	Severe Housing Cost Burden
	Homelessness Rate
	Long Commute - Driving

Primary Themes	Secondary Indicators
	Alone Access to Public Transit

### Safe and Violence-Free Environment

Table 25: Primary themes and secondary indicators associated with PHN4.

Primary Themes	Secondary Indicators
People feel unsafe because of crime.	Life Expectancy
There are not enough resources to address domestic violence and sexual assault.	Premature Death
Isolated or poorly-lit streets make pedestrian travel unsafe.	Hypertension Mortality
Public parks seem unsafe because of illegal activity taking place.	Poor Mental Health Days
Youth need more safe places to go after school.	Frequent Mental Distress
Specific groups in this community are targeted because of characteristics like race/ethnicity or age.	Frequent Physical Distress
There isn't adequate police protection.	Poor or Fair Health
Gang activity is an issue in the area.	Physical Inactivity
Human trafficking is an issue in the area.	Access to Exercise Opportunities
The current political environment makes some concerned for their safety.	Homicide Rate
	Firearm Fatalities Rate
	Violent Crime Rate
	Juvenile Arrest Rate
	Motor Vehicle Crash Death
	Disconnected Youth
	Social Associations
	Income Inequality
	Severe Housing Problems
	Severe Housing Cost Burden
	Homelessness Rate

### Access to Dental Care and Preventive Services

Table 26: Primary themes and secondary indicators associated with PHN5.

Primary Themes	Secondary Indicators
There aren't enough providers in the area who accept Denti-Cal.	Frequent Mental Distress
The lack of access to dental care here leads to overuse of emergency departments.	Poor Physical Health Days
Quality dental services for kids are lacking.	Frequent Physical Distress
It's hard to get an appointment for dental care.	Poor or Fair Health
People in the area have to travel to receive dental care.	Dental Care Shortage Area
Dental care here is unaffordable, even if you have insurance.	Dentists
	Residential Segregation (Non-White/White)

Primary Themes	Secondary Indicators
	Income Inequality
	Homelessness Rate

## Healthy Physical Environment

Table 27: Primary themes and secondary indicators associated with PHN6.

Primary Themes	Secondary Indicators
The air quality contributes to high rates of asthma.	Infant Mortality
Poor water quality is a concern in the area.	Life Expectancy
Agricultural activity harms the air quality.	Premature Age-Adjusted Mortality
Low-income housing is substandard.	Premature Death
Residents' use of tobacco and e-cigarettes harms the air quality.	Chronic Lower Respiratory Disease Mortality
Industrial activity in the area harms the air quality.	Hypertension Mortality
Heavy traffic in the area harms the air quality.	Cancer Mortality
Wildfires in the region harm the air quality.	Frequent Mental Distress
	Frequent Physical Distress
	Poor or Fair Health
	Colorectal Cancer Prevalence
	Breast Cancer Prevalence
	Lung Cancer Prevalence
	Prostate Cancer Prevalence
	Asthma ED Rates
	Asthma ED Rates for Children
	Adult Smoking
	Income Inequality
	Severe Housing Cost Burden
	Homelessness Rate
	Long Commute - Driving Alone
	Pollution Burden Percent
	Air Pollution - Particulate Matter
	Drinking Water Violations

## Access to Basic Needs Such as Housing, Jobs, and Food

Table 28: Primary themes and secondary indicators associated with PHN7.

Primary Themes	Secondary Indicators
Lack of affordable housing is a significant issue in the area.	Infant Mortality
The area needs additional low-income housing options.	Child Mortality
Poverty in the county is high.	Life Expectancy
Many people in the area do not make a living wage.	Premature Age-Adjusted Mortality
Employment opportunities in the area are limited.	Premature Death

Primary Themes	Secondary Indicators
Services for homeless residents in the area are insufficient.	Hypertension Mortality
Services are inaccessible for Spanish-speaking and immigrant residents.	COVID-19 Mortality
Many residents struggle with food insecurity.	COVID-19 Case Fatality
It is difficult to find affordable childcare.	Diabetes Prevalence
Educational attainment in the area is low.	Low Birthweight
	Poor Mental Health Days
	Frequent Mental Distress
	Poor Physical Health Days
	Frequent Physical Distress
	Poor or Fair Health
	COVID-19 Cumulative Incidence
	Asthma ED Rates
	Asthma ED Rates for Children
	Drug Induced Death
	Adult Obesity
	Limited Access to Healthy Foods
	Food Environment Index
	Medically Underserved Area
	COVID-19 Cumulative Full Vaccination Rate
	Some College
	High School Completion
	Disconnected Youth
	Third Grade Reading Level
	Third Grade Math Level
	Unemployment
	Children in Single-Parent Households
	Social Associations
	Residential Segregation (Non-White/White)
	Children Eligible for Free Lunch
	Children in Poverty
	Median Household Income
	Uninsured Population under 64
	Income Inequality
	Severe Housing Problems
	Severe Housing Cost Burden
	Homeownership
	Homelessness Rate
	Households with no Vehicle Available
	Long Commute - Driving Alone



## Access to Functional Needs

Table 29: Primary themes and secondary indicators associated with PHN8.

Primary Themes	Secondary Indicators
Many residents do not have reliable personal transportation.	Disability
Medical transport in the area is limited.	Frequent Mental Distress
Roads and sidewalks in the area are not well-maintained.	Frequent Physical Distress
The distance between service providers is inconvenient for those using public transportation.	Poor or Fair Health
Using public transportation to reach providers can take a very long time.	Adult Obesity
The cost of public transportation is too high.	COVID-19 Cumulative Full Vaccination Rate
Public transportation service routes are limited.	Income Inequality
Public transportation schedules are limited.	Homelessness Rate
The geography of the area makes it difficult for those without reliable transportation to get around.	Households with no Vehicle Available
Public transportation is more difficult for some residents to use (e.g., non-English speakers, seniors, parents with young children).	Long Commute - Driving Alone
There aren't enough taxi and ride-share options (e.g., Uber, Lyft).	Access to Public Transit

## Access to Specialty and Extended Care

Table 30: Primary themes and secondary indicators associated with PHN9.

Primary Themes	Secondary Indicators
Wait-times for specialist appointments are excessively long.	Infant Mortality
It is difficult to recruit and retain specialists in the area.	Life Expectancy
Not all specialty care is covered by insurance.	Premature Age-Adjusted Mortality
Out-of-pocket costs for specialty and extended care are too high.	Premature Death
People have to travel to reach specialists.	Stroke Mortality
Too few specialty and extended care providers accept Medi-Cal.	Chronic Lower Respiratory Disease Mortality
The area needs more extended care options for the aging population (e.g. skilled nursing homes, in-home care)	Diabetes Mortality
There isn't enough OB/GYN care available.	Heart Disease Mortality
Additional hospice and palliative care options are needed.	Hypertension Mortality
The area lacks a kind of specialist or extended care option not listed here.	Cancer Mortality
	Liver Disease Mortality
	Kidney Disease Mortality
	COVID-19 Mortality
	COVID-19 Case Fatality
	Alzheimer's Disease Mortality
	Diabetes Prevalence
	Poor Mental Health Days
	Frequent Mental Distress
	Poor Physical Health Days
	Frequent Physical Distress

Primary Themes	Secondary Indicators
	Poor or Fair Health
	Lung Cancer Prevalence
	Asthma ED Rates
	Asthma ED Rates for Children
	Drug Induced Death
	Psychiatry Providers
	Specialty Care Providers
	Preventable Hospitalization
	Residential Segregation (Non-White/White)
	Income Inequality
	Homelessness Rate

## Injury and Disease Prevention and Management

*Table 31: Primary themes and secondary indicators associated with PHN10.*

Primary Themes	Secondary Indicators
There isn't really a focus on prevention around here.	Infant Mortality
Preventive health services for women are needed (e.g., breast and cervical cancer screening).	Child Mortality
There should be a greater focus on chronic disease prevention (e.g. diabetes, heart disease).	Stroke Mortality
Vaccination rates are lower than they need to be.	Chronic Lower Respiratory Disease Mortality
Health education in the schools needs to be improved.	Diabetes Mortality
Additional HIV and STI prevention efforts are needed.	Heart Disease Mortality
The community needs nutrition education opportunities.	Hypertension Mortality
Schools should offer better sexual health education.	Liver Disease Mortality
Prevention efforts need to be focused on specific populations in the community (e.g. youth, Spanish-speaking residents, the elderly, LGBTQ individuals, immigrants).	Kidney Disease Mortality
Patients need to be better connected to service providers (e.g. case management, patient navigation, or centralized service provision).	Suicide Mortality
	Unintentional Injuries Mortality
	COVID-19 Mortality
	COVID-19 Case Fatality
	Alzheimer's Disease Mortality
	Diabetes Prevalence
	Low Birthweight
	HIV Prevalence
	Poor Mental Health Days
	Frequent Mental Distress
	Frequent Physical Distress
	Poor or Fair Health
	COVID-19 Cumulative Incidence
	Asthma ED Rates

Primary Themes	Secondary Indicators
	Asthma ED Rates for Children
	Excessive Drinking
	Drug Induced Death
	Adult Obesity
	Physical Inactivity
	Chlamydia Incidence
	Teen Birth Rate
	Adult Smoking
	COVID-19 Cumulative Full Vaccination Rate
	Firearm Fatalities Rate
	Juvenile Arrest Rate
	Motor Vehicle Crash Death
	Disconnected Youth
	Third Grade Reading Level
	Third Grade Math Level
	Income Inequality
	Homelessness Rate

### Increased Community Connections

Table 32: Primary themes and secondary indicators associated with PHN11.

Primary Themes	Secondary Indicators
Health and social-service providers operate in silos; we need cross-sector connection.	Infant Mortality
Building community connections doesn't seem like a focus in the area.	Child Mortality
Relations between law enforcement and the community need to be improved.	Life Expectancy
The community needs to invest more in the local public schools.	Premature Age-Adjusted Mortality
There isn't enough funding for social services in the county.	Premature Death
People in the community face discrimination from local service providers.	Stroke Mortality
City and county leaders need to work together.	Diabetes Mortality
	Heart Disease Mortality
	Hypertension Mortality
	Suicide Mortality
	Unintentional Injuries Mortality
	Diabetes Prevalence
	Low Birthweight
	Poor Mental Health Days
	Frequent Mental Distress
	Poor Physical Health Days
	Frequent Physical Distress
	Poor or Fair Health
	Excessive Drinking

Primary Themes	Secondary Indicators
	Drug Induced Death
	Physical Inactivity
	Access to Exercise Opportunities
	Teen Birth Rate
	Primary Care Shortage Area
	Mental Health Care Shortage Area
	Medically Underserved Area
	Mental Health Providers
	Psychiatry Providers
	Specialty Care Providers
	Primary Care Providers
	Preventable Hospitalization
	COVID-19 Cumulative Full
	Vaccination Rate
	Homicide Rate
	Firearm Fatalities Rate
	Violent Crime Rate
	Juvenile Arrest Rate
	Some College
	High School Completion
	Disconnected Youth
	Unemployment
	Children in Single-Parent
	Households
	Social Associations
	Residential Segregation (Non-White/White)
	Income Inequality
	Homelessness Rate
	Households with no Vehicle Available
	Long Commute - Driving Alone
	Access to Public Transit

### System Navigation

Table 33: Primary themes and secondary indicators associated with PHN12.

Primary Themes	Secondary Indicators
People may not be aware of the services they are eligible for.	
It is difficult for people to navigate multiple, different health care systems.	
The area needs more navigators to help to get people connected to services.	
People have trouble understanding their insurance benefits.	
Automated phone systems can be difficult for those who are unfamiliar with the	

Primary Themes	Secondary Indicators
healthcare system	
Dealing with medical and insurance paperwork can be overwhelming.	
Medical terminology is confusing.	
Some people just don't know where to start in order to access care or benefits.	

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 34 lists each secondary indicator and describes the comparison made to the benchmark to determine if it was problematic.

*Table 34: Benchmark comparisons to show indicator performance.*

Indicator	Benchmark Comparison Indicating Poor Performance
Infant Mortality	Higher
Child Mortality	Higher
Life Expectancy	Lower
Premature Age-Adjusted Mortality	Higher
Premature Death	Higher
Stroke Mortality	Higher
Chronic Lower Respiratory Disease Mortality	Higher
Diabetes Mortality	Higher
Heart Disease Mortality	Higher
Hypertension Mortality	Higher
Cancer Mortality	Higher
Liver Disease Mortality	Higher
Kidney Disease Mortality	Higher
Suicide Mortality	Higher
Unintentional Injuries Mortality	Higher
COVID-19 Mortality	Higher
COVID-19 Case Fatality	Higher
Alzheimer's Disease Mortality	Higher
Influenza and Pneumonia Mortality	Higher
Diabetes Prevalence	Higher
Low Birthweight	Higher
HIV Prevalence	Higher
Disability	Higher
Poor Mental Health Days	Higher
Frequent Mental Distress	Higher
Poor Physical Health Days	Higher
Frequent Physical Distress	Higher
Poor or Fair Health	Higher
Colorectal Cancer Prevalence	Higher

Indicator	Benchmark Comparison Indicating Poor Performance
Breast Cancer Prevalence	Higher
Lung Cancer Prevalence	Higher
Prostate Cancer Prevalence	Higher
COVID-19 Cumulative Incidence	Higher
Asthma ED Rates	Higher
Asthma ED Rates for Children	Higher
Excessive Drinking	Higher
Drug Induced Death	Higher
Adult Obesity	Higher
Physical Inactivity	Higher
Limited Access to Healthy Foods	Higher
Food Environment Index	Lower
Access to Exercise Opportunities	Lower
Chlamydia Incidence	Higher
Teen Birth Rate	Higher
Adult Smoking	Higher
Primary Care Shortage Area	Present
Dental Care Shortage Area	Present
Mental Health Care Shortage Area	Present
Medically Underserved Area	Present
Mammography Screening	Lower
Dentists	Lower
Mental Health Providers	Lower
Psychiatry Providers	Lower
Specialty Care Providers	Lower
Primary Care Providers	Lower
Preventable Hospitalization	Higher
COVID-19 Cumulative Full Vaccination Rate	Lower
Homicide Rate	Higher
Firearm Fatalities Rate	Higher
Violent Crime Rate	Higher
Juvenile Arrest Rate	Higher
Motor Vehicle Crash Death	Higher
Some College	Lower
High School Completion	Lower
Disconnected Youth	Higher
Third Grade Reading Level	Lower
Third Grade Math Level	Lower
Unemployment	Higher
Children in Single-Parent Households	Higher
Social Associations	Lower
Residential Segregation (Non-White/White)	Higher
Children Eligible for Free Lunch	Higher
Children in Poverty	Higher
Median Household Income	Lower
Uninsured Population under 64	Higher
Income Inequality	Higher

Indicator	Benchmark Comparison Indicating Poor Performance
Severe Housing Problems	Higher
Severe Housing Cost Burden	Higher
Homeownership	Lower
Homelessness Rate	Higher
Households with no Vehicle Available	Higher
Long Commute - Driving Alone	Higher
Access to Public Transit	Lower
Pollution Burden Percent	Higher
Air Pollution - Particulate Matter	Higher
Drinking Water Violations	Present

Once these poorly performing quantitative indicators were identified, they were used to determine 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 HSA. While all PHNs represented actual health needs within the HSA 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 10%, 20%, 30%, 40%, 50%, 60%, 70%, or 80% of the associated indicators were found to perform poorly. A similar set of standards was used to identify the preliminary interview and focus-group health needs: any of the respondents mentioned a theme associated with a PHN, or if at least 10%, 20%, 30%, 40%, 50%, 60%, 70%, or 80% of the respondents mentioned an associated theme. Finally, similar thresholds (any mention, 10%, 20%, 30%, 40%, 50%, 60%, 70%, or 80%) were also applied to the percent of survey respondents selecting a particular health need as one of the top health needs in the HSA.

These sets of criteria (any mention, 10%, 20%, 30%, 40%, 50%, 60%, 70%, or 80%) were used because we could not anticipate which specific standard would be most meaningful within the context of the HSA. 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 HSA. 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.

For this report, a PHN was selected as a preliminary quantitative significant health need if 60% of the associated quantitative indicators were identified as performing poorly; as a preliminary qualitative significant health need if it was identified by 60% or more of the primary sources as performing poorly; and as a preliminary community survey provider survey significant health need if it was identified by at least 60% of survey respondents. Finally, a PHN was selected as a significant health need if it was included as a preliminary significant health need in any two of these categories.

### Health Need Prioritization

The final step in the analysis was to prioritize the identified SHNs. 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 need 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. Finally, the number of times each health need was selected as one of the top health needs by survey respondents was also included.

These three measures were then 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

Table 35: Resources available to meet health needs.

Organization Information			Significant Health Needs								Other Health Needs			
Name	Primary ZIP Code	Website	Access to Mental/Behavioral Health and Substance	Access to Basic Needs Such as Housing, Jobs, and Food	Active Living and Healthy Eating	Access to Specialty and Extended Care	Access to Quality Primary Care Health Services	Access to Functional Needs	Injury and Disease Prevention and Management	Increased Community Connections	Safe and Violence-Free Environment	Access to Dental Care and Preventive Services	Healthy Physical Environment	System Navigation
A Woman's Friend	95991	www.awomansfriend.org				x			x					x
Adventist Health and Rideout	95901	www.adventisthealth.org/rideout	x			x	x			x				
Aegis Medical System	95901	pinnacletreatment.com/location/california/marysville/aegis-treatment-centers-marysville	x											x
Agency on Aging\Area 4	95901, 95991	agencyonaging4.org			x	x		x						
Alliance for Hispanic Advancement	95992	aha-ys.org								x				
Ampla Health	95991	www.amplahealth.org	x			x	x					x		x
Ampla Health - Lindhurst	95961	www.amplahealth.org/health-centers/lindhurst-medical-dental	x			x	x					x		x
Ampla Health - Richland	95991	www.amplahealth.org/health-centers/richland-medical	x			x	x					x		x
Ampla Health - Yuba City Medical	95991	www.amplahealth.org/health-centers/yuba-city-medical-xpress-care	x			x	x					x		x
Ampla Health - Colusa	95932	www.amplahealth.org/health-centers/colusa-medical-dental	x			x	x					x		x
Ampla Health- Lindhurst Medical & Dental - Olivehurst Low Cost Clinic	95961	www.amplahealth.org/health-centers/lindhurst-medical-dental					x			x		x		
Ampla Health- Yuba County WIC	95901	www.amplahealth.org/wic		x	x									

Organization Information			Significant Health Needs										Other Health Needs	
Name	Primary ZIP Code	Website	Access to Mental/Behavioral Health and Substance	Access to Basic Needs Such as Housing, Jobs, and Food	Active Living and Healthy Eating	Access to Specialty and Extended Care	Access to Quality Primary Care Health Services	Access to Functional Needs	Injury and Disease Prevention and Management	Increased Community Connections	Safe and Violence-Free Environment	Access to Dental Care and Preventive Services	Healthy Physical Environment	System Navigation
Anthem Blue Cross (Local Medi-Cal Payer)	95901	<a href="http://www.dhcs.ca.gov/individuals/Pages/MCDHealthPlanDir.aspx">www.dhcs.ca.gov/individuals/Pages/MCDHealthPlanDir.aspx</a>												X
Beale Air Force Base-Child Development Center	95903	<a href="http://www.bealefss.com/cdc">www.bealefss.com/cdc</a>							X	X	X			
Bible Baptist- Food Pantry	95901	<a href="http://bbc4me.org">bbc4me.org</a>		X						X				
Bi-County Mental Health (also known as Sutter-Yuba Behavioral Health Services)	95991	<a href="http://www.suttercounty.org/government/county-departments/health-and-human-services/sutter-yuba-behavioral-health">www.suttercounty.org/government/county-departments/health-and-human-services/sutter-yuba-behavioral-health</a>	X											X
Bridges to Housing	95901	<a href="http://www.bridgestohousing.net">www.bridgestohousing.net</a>		X										
Buddy's House	95991	<a href="http://www.buddyshouse.org">www.buddyshouse.org</a>	X	X										X
California Tribal TANF	95901	<a href="http://cttp.net/locations">cttp.net/locations</a>		X					X	X				
Casa de Esperanza	95992	<a href="http://www.facebook.com/CasadeEsperanzaNorCal/about?ref=page_internal">www.facebook.com/CasadeEsperanzaNorCal/about?ref=page_internal</a>		X							X			
Child Care Planning Council of Yuba & Sutter Counties	95901	<a href="http://www.childcareyubasutter.com">www.childcareyubasutter.com</a>	X						X	X				
Children Health & Disability Prevention Program (CDPH)	95901	<a href="http://www.dhcs.ca.gov/services/chdp/Pages/default.aspx">www.dhcs.ca.gov/services/chdp/Pages/default.aspx</a>					X	X	X					X
Co-Dependents Anonymous for Men & Women (CODA)	95991	<a href="http://coda.org/meeting/twin-cities-co-dependents-anonymous">coda.org/meeting/twin-cities-co-dependents-anonymous</a>	X							X				
Colusa County Community in Unity Family Resource Center	95932	<a href="http://www.colusafrc.org">www.colusafrc.org</a>	X	X	X		X		X	X		X		

Organization Information			Significant Health Needs								Other Health Needs			
Name	Primary ZIP Code	Website	Access to Mental/Behavioral Health and Substance	Access to Basic Needs Such as Housing, Jobs, and Food	Active Living and Healthy Eating	Access to Specialty and Extended Care	Access to Quality Primary Care Health Services	Access to Functional Needs	Injury and Disease Prevention and Management	Increased Community Connections	Safe and Violence-Free Environment	Access to Dental Care and Preventive Services	Healthy Physical Environment	System Navigation
Colusa County Department of Health and Human Services Public Health Division California Children's Services	95932	www.countyofcolusa.org/99/Public-Health	x	X		x	x		x			x		
Colusa County Senior Nutrition Program	95932	www.countyofcolusa.org/286/Senior-Nutrition		X	x									
Colusa County Veteran Services	95932	www.countyofcolusa.org/180/Veterans-Services		X										x
Colusa Medical Center	95932	colusamedcenter.com			x	x	x							x
Comfort Keepers	95901	www.comfortkeepers.com/offices/california/marysville?utm_source=GMBlisting&utm_medium=organic				x		x						
First 5 Colusa	95932	www.countyofcolusa.org/948/First-5	x	X	x		x		x			x		
First 5 Yuba County	95901	www.first5yuba.org	x	X	x		x		x	x	x			
FREED Center for Independent Living (Transportation Voucher Program)	95901	freed.org/services/independent-living/senior-transportation-voucher-program	x					x	x					
Habitat for Humanity	95901	yubasutterhabitat.org		X						x				
Hands of Hope	95992	www.ychandsofhope.org		X						x				x
Harmony Health Medical Clinic & Family Resource Center	95901	www.myharmonyhealth.org	x			x	x		x	x				
Hmong Outreach Center	95961	sutter.networkofcare.org/mh/services/agency.aspx?pid=SutterYubaBehavioralHealthHmongOutreachCenter_161_2_0	x											x

Organization Information			Significant Health Needs								Other Health Needs			
Name	Primary ZIP Code	Website	Access to Mental/Behavioral Health and Substance	Access to Basic Needs Such as Housing, Jobs, and Food	Active Living and Healthy Eating	Access to Specialty and Extended Care	Access to Quality Primary Care Health Services	Access to Functional Needs	Injury and Disease Prevention and Management	Increased Community Connections	Safe and Violence-Free Environment	Access to Dental Care and Preventive Services	Healthy Physical Environment	System Navigation
Latino Outreach Center	95991	sutter.networkofcare.org/mh/services/agency.aspx?pid=SutterYubaBehavioralHealthLatinoOutreachCenter_161_2_0	x											x
Marysville Police Department	95901	www.marysvillepd.org								x	x			
Pathways Recovery & Wellness Through Life-long Change, Alcohol Treatment Program	95901	www.yspathways.net	x						x				x	
Peach Tree Health- Live Oak Clinic, Yuba City, Linda	95953	pickpeach.org	x			x	x			x		x		x
Peach Tree Health- Marysville Immediate Care Clinic	95901	pickpeach.org/location/marysville-immediate-care	x			x	x			x				x
Peach Tree Health- Yuba City	95993	pickpeach.org/location/peach-tree-yuba-city	x				x		x			x		x
Peach Tree Pediatrics- Marysville	95991	pickpeach.org/location/marysville-immediate-care/peach-tree-pediatrics-2	x			x	x					x		x
Pick Peach-Peach Tree Health Marysville	95901	pickpeach.org/?gclid=CjwKCAiAo4OQBhBBEiwA5KWu_7iramTLYOuefXgoaKCxR5mgrKCq33TZyqgNzEuFoa1kWo2jlQkeBoCP6MQAvD_BwE	x				x		x					x
Planned Parenthood: Yuba City Health Center	95991	www.plannedparenthood.org/health-center/california/yuba-city/95991/yuba-city-health-center-2374-90130?utm_campaign=yuba-city-health-center&utm_medium=organic&utm_source=local-listing				x	x		x					
Rotary Club of Yuba City	95991	rotary5180.org								x				

Organization Information			Significant Health Needs								Other Health Needs			
Name	Primary ZIP Code	Website	Access to Mental/Behavioral Health and Substance	Access to Basic Needs Such as Housing, Jobs, and Food	Active Living and Healthy Eating	Access to Specialty and Extended Care	Access to Quality Primary Care Health Services	Access to Functional Needs	Injury and Disease Prevention and Management	Increased Community Connections	Safe and Violence-Free Environment	Access to Dental Care and Preventive Services	Healthy Physical Environment	System Navigation
Salvation Army	95991	yubasutter.salvationarmy.org	x	X	x				x		x		x	
St. Andrew Church- Mother Hubbard's Cupboard Food Pantry	95993	www.standrewpcusa.org/index.php		X						x				
St. Isidore Catholic Church- Food Pantry	95991	stisidore-yubacity.org		X						x				
St. John's Episcopal Church	95901	www.saintjohnsepiscopal.org		X	x					x				
St. Joseph's Catholic Church	95901	www.stjoseph-marysville.org/index.html		X	x					x				
St. Vincent De Paul- Food Locker	95991	stisidore-yubacity.org/join-serve/community-outreach/society-saint-vincent-de-paul/st-vincent-de-paul-food-locker		X						x				
Sutter Care at Home	95991	www.sutterhealth.org/find-location/facility/sutter-care-at-home-yuba-city-home-health			x	x			x				x	x
Sutter County Board of Supervisors	95993	www.suttercounty.org/government/board-of-supervisors												
Sutter County Children & Families Commission	95993	sutterkids.org	x	X	x				x	x	x			x
Sutter County- Maternal Child and Adolescent Health	95901	www.suttercounty.org/government/county-departments/health-and-human-services/public-health/maternal-child-adolescent-health				x			x					
Sutter County Department of Public Health	95993	www.suttercounty.org/government/county-departments/health-and-human-services/public-health		X	x		x		x			x	x	

Organization Information			Significant Health Needs								Other Health Needs			
Name	Primary ZIP Code	Website	Access to Mental/Behavioral Health and Substance	Access to Basic Needs Such as Housing, Jobs, and Food	Active Living and Healthy Eating	Access to Specialty and Extended Care	Access to Quality Primary Care Health Services	Access to Functional Needs	Injury and Disease Prevention and Management	Increased Community Connections	Safe and Violence-Free Environment	Access to Dental Care and Preventive Services	Healthy Physical Environment	System Navigation
Sutter County WIC	95953	<a href="http://www.suttercounty.org/government/county-departments/health-and-human-services/public-health/wic-supplemental-food-program">www.suttercounty.org/government/county-departments/health-and-human-services/public-health/wic-supplemental-food-program</a>		X	x				x					x
Sutter Medical Foundation	95991	<a href="http://www.sutterhealth.org/smf">www.sutterhealth.org/smf</a>	x			x	x		x	x				
Sutter Medical Plaza Brownsville	95919	<a href="http://www.sutterhealth.org/find-location/facility/sutter-medical-plaza-brownsville">www.sutterhealth.org/find-location/facility/sutter-medical-plaza-brownsville</a>	x			x	x							x
Sutter Surgical Hospital North Valley	95991	<a href="http://www.sutterhealth.org/find-location/facility/sutter-surgical-hospital-north-valley">www.sutterhealth.org/find-location/facility/sutter-surgical-hospital-north-valley</a>				x			x					x
Sutter Yuba Homeless Consortium	95992	<a href="http://www.syhomelessconsortium.org">www.syhomelessconsortium.org</a>	x	X										x
The Liv On Foundation	95993	<a href="https://thelivonfoundation.org/#ContactUs">https://thelivonfoundation.org/#ContactUs</a>									x			
Twin City Rescue Mission	95901	<a href="http://tcmission.com">tcmission.com</a>		X							x			
United Way/ Yuba-Sutter-Colusa	95901	<a href="http://www.yscunitedway.org">www.yscunitedway.org</a>		X			x			x				
Victor Community Support Services- Marysville	95901	<a href="http://www.victor.org/marysville">www.victor.org/marysville</a>	x						x					
Western Farm Workers Association	95991	<a href="http://labor-organizations.cmac.ws/western-farm-workers-association/1245">labor-organizations.cmac.ws/western-farm-workers-association/1245</a>			x									
Women's Health Specialists- Feminist Women's Health Center	95928	<a href="http://www.womenshealthspecialists.org/">www.womenshealthspecialists.org/</a>				x			x					
Youth for Change	95991	<a href="http://www.youth4change.org">www.youth4change.org</a>	x	X						x	x			x

Organization Information			Significant Health Needs								Other Health Needs			
Name	Primary ZIP Code	Website	Access to Mental/Behavioral Health and Substance	Access to Basic Needs Such as Housing, Jobs, and Food	Active Living and Healthy Eating	Access to Specialty and Extended Care	Access to Quality Primary Care Health Services	Access to Functional Needs	Injury and Disease Prevention and Management	Increased Community Connections	Safe and Violence-Free Environment	Access to Dental Care and Preventive Services	Healthy Physical Environment	System Navigation
Yuba City Police Department	95993	www.yubacity.net/city_hall/departments/police_department								X	X			
Yuba City Senior Center	95991	www.yubacity.net/community/senior_life			X				X	X	X			
Yuba College Clinic	95901	yc.yccd.edu/student/health-clinic					X			X				
Yuba County Adult Services Division	95901	www.co.yuba.ca.us/departments/hhsd/aps/		X	X				X		X			
Yuba County Board of Supervisors	95901	www.yuba.org/departments/board_of_supervisors/index.php								X				
Yuba County Children's Services	95901	www.co.yuba.ca.us/departments/hhsd/cws/	X		X				X		X		X	
Yuba County Family Resource Center	95901	www.yubacoe.org/Page/406					X	X	X	X				
Yuba County Health and Human Services Division	95901	www.yuba.org/departments/health_and_human_services/index.php	X		X		X		X			X	X	X
Yuba County WIC	95961	www.amplahealth.org/women-infants-and-children-wic-program.html		X	X				X					
Yuba Sutter Healthcare Council	95993	www.yubasutterhealthcarecouncil.org			X		X		X	X			X	
Yuba Sutter Transit	95901	www.yubasuttertransit.com						X						
Yuba/Sutter County Mobile Smiles Dental Van- The Happy Toothmobile Dental Office	95991, 95901, 95982	pickpeach.org/dental										X		
Yuba-Sutter Counties Veteran Service Office	95901	www.suttercounty.org/government/county-departments/veteran-services	X			X	X		X					X
Yuba-Sutter Food Bank	95991	feedingys.org		X										

Organization Information			Significant Health Needs								Other Health Needs			
Name	Primary ZIP Code	Website	Access to Mental/Behavioral Health and Substance	Access to Basic Needs Such as Housing, Jobs, and Food	Active Living and Healthy Eating	Access to Specialty and Extended Care	Access to Quality Primary Care Health Services	Access to Functional Needs	Injury and Disease Prevention and Management	Increased Community Connections	Safe and Violence-Free Environment	Access to Dental Care and Preventive Services	Healthy Physical Environment	System Navigation
Yuba-Sutter Gleaners Food	95991	<a href="http://www.freefood.org/l/yuba-sutter_gleaners_food_bank_inc">www.freefood.org/l/yuba-sutter_gleaners_food_bank_inc</a>		X	x									
Yuba-Sutter- Head Start, WIC	95901	<a href="http://www.ecenter.org">www.ecenter.org</a>		X					x					
Yuba-Sutter Meals on Wheels	95901	<a href="http://agencyonaging4.org/yuba-sutter-meals-on-wheels/">agencyonaging4.org/yuba-sutter-meals-on-wheels/</a>		X										



## Limits and Information Gaps

Study limitations for this CHNA included obtaining secondary quantitative data specific to population subgroups, and assuring community representation through primary data collection. Most quantitative data used in this assessment were not available by race/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.

For primary data, gaining access to participants that best represent the populations needed for this assessment was a challenge for the key informant interviews, focus groups and CSP survey. The COVID-19 pandemic made this more difficult as community members were more difficult to recruit for focus groups. Though an effort was made to verify all resources (assets) through a web search, ultimately some resources that exist in the service area may not be listed.

Finally, though this CHNA was conducted with an equity focus, data that point to differences among population subgroups that are more “upstream” focused are not as available as those data that detail the resulting health disparities. Having a clearer picture of early-in-life opportunity differences experienced among various populations that result in later-in-life disparities can help direct community health improvement efforts for maximum impact.

# Appendix A – Impact of Actions Taken by Adventist Health and Rideout

## ADVENTIST HEALTH AND RIDEOUT MEDICAL CENTER

Prior to this CHNA, AHRO conducted its most recent CHNA in 2019. The 2019 CHNA identified the following eight prioritized health needs:

1. Access to Mental/Behavioral/Substance Use Services
2. Prevention of Disease and Injury through Knowledge, Action, and Access to Resources
3. Access to Basic Needs Such as Housing, Jobs, and Food
4. Access and Functional Needs
5. Access to Quality Primary Care Health Services
6. Access to Specialty and Extended Care
7. Active Living and Healthy Eating
8. Safe and Violence-Free Environment

Working within its mission and capabilities, AHRO dedicated efforts to help impact all eight prioritized health needs over the last three years. Specific outcomes of these efforts are described below.

### 1. ACCESS TO MENTAL/BEHAVIORAL/SUBSTANCE USE SERVICES.

Adventist Health and Rideout initiated several projects to positively impact the access to primary care and prescription medications. Of the initiatives set forth, the following have been most impactful:

**SUN/BRIDGE NAVIGATOR PROGRAM:** To address the growing opioid problem in the area, Adventist Health and Rideout and Vituity through grants started the SUN/BRIDGE Program. This program offers a patient centered approach to 24/7 access to medication for addiction treatment. Patients are treated with Buprenorphine to ease symptoms of withdrawal and then are connected to outpatient treatment with medications and counseling in the community. This model of addiction treatment with medications plus counseling is call Medication Assisted Treatment (MAT) and has been shown to be the most effective method to treat patients with Opioid Use Disorder (OUD).

- **Outcomes 2019-2021:**
- 2019: Total OUD (Opiate Use Disorder) patients 168, total accepted treatment appointments 57, Total attended appointment 50. Total attendance rate was 88%.
- 2020: Total OUD patients 235, total accepted treatment appointments 98, Total attended appointments 81. Total attendance rate was 83%.
- 2021: Total OUD patients 179, total accepted treatment appointment 73, Total attended appointments 62. Total attendance rate was 85%.

### The Behavioral Health Collaborative

The volume of behavioral health patients in the Adventist Health and Rideout Emergency Department has steadily increased in recent years due to the lack of funding for behavioral health services and lack of facilities/providers in our rural area. To deliver the highest quality of care for behavioral health

patients in the Emergency Department, Adventist Health and Rideout partnered with county resources to imbed county-paid crisis counselors in the Emergency Department 24 hours a day. As a team, the county and hospital have created a process to provide high quality care to the psychiatric patient in the ED. The Behavioral Health Collaborative is made possible through the creation of a robust safety program and discharge plans by our county worker's and tele-psychiatry services. Every patient receives true psychiatric care while they are in the ED and this includes the same type of assessment, medication recommendations, and discharge and safety plans performed by behavioral health experts.

- **Outcomes 2019-2021:** Total patient served: 6,937
- 2019: 2,227 patients served
- 2020: 2,369 patients served
- 2021: 2341 patients served

## **2. PREVENTION OF DISEASE AND INJURY through KNOWLEDGE, ACTION, AND ACCESS to RESOURCES.**

**Food Secure Program:** Our Food Security program sets out to prevent hunger, and in turn increase health and well-being while decreasing chronic diseases and hospitalizations. In response to the 2019, CHNA, Adventist Health and Rideout has developed a screening protocol to identify patients who are food insecure and connect them with both food itself and more resources to access food. Every patient who is admitted to Adventist Health and Rideout or visits our Emergency Department is asked specific questions about being food insecure. If those screening questions reveal a need, the patient is then referred to our Community Health Project Manager, who works to provide person specific resources, referrals, as well as a bag of non-perishable food upon discharge and in most cases the patient is provided a referral to a local food pantry.

- **Outcomes 2019-2021:**
- 1,088 Hospital patients served
- 282 Meals delivered in partnership with the Yuba-Sutter Food Bank and Yuba-Sutter Behavioral Health
- 498 Food Resources/Food provided to those experiencing homelessness
- 1825 Community Families served through USDA food boxes
- 2300 Families served via monetary donations to So You Can and The Salvation Army

**Stroke Prevention Program:** The focus of stroke prevention is community awareness on early stroke recognition using the BEFAST acronym: Balance, Eyes, Face, Arms, Speech and Time. The program offers enhanced access to optimal, timely treatment and services to help decrease rates of stroke-related disability and mortality in the community.

The AHRO Stroke program is committed to providing high-quality stroke care and the best possible patient experience and health outcomes for everyone experiencing a stroke in the Yuba-Sutter and surrounding counties.

- **Outcomes 2019-2021:**
- In 2019, the processes, recruitment and formation of the program got started.
- In 2020, a total of 157 persons were provided education.
- In 2021, Due to Covid-19, the education was done differently. The stroke RN participated in the BEFAST campaign event at the Senior Center and Christmas Stroll. This consisted of handing out flyers at both events. The total number of flyers provided to the community was not captured.

1)

**Weight Management Support Group:** The Adventist Health and Rideout Bariatric Surgery Support Group is offered at no charge to people who have had or are planning to have bariatric surgery. The group facilitates networking and education and meets once a month.

- **Outcomes 2019-2021:** Total patients served 115
- In 2019, 25 patients served.
- In 2020, 73 patients served.
- In 2021, 17 patients served due to Covid-19.

**COPD Support Group/Better Breathers Club:** The Better Breathers Club is a support group for those living with COPD. The group meets monthly and covers educational topics including oxygen, sleep apnea, nutritional needs, exercise, and medications. This class is done through the American Lung Association in partnership with Adventist Health and Rideout.

- **Outcomes 2019-2021:** Total patients served: 46
- In 2019, 28 patients served
- In 2020, 18 patients served
- In 2021, Due to Covid-19, classes were not held in 2021.

**Tobacco Cessation Education:** Adventist Health and Rideout provides a free smoking cessation program for the community. This program teaches the “Freedom from Smoking Course.” This class is done through the American Lung Association in partnership with Adventist Health and Rideout.

- **Outcomes 2019-2021:** Total patients served: 313
- In 2019, 20 persons served
- In 2020, 34 persons served
- In 2021, 259 persons served

**Cancer Support Group:** Adventist Health and Rideout offers multiple programs for Cancer patients and survivors. Included in the offerings are a weekly support group for individuals and caregivers. These weekly sessions help those in need of emotional support, loss of life transition, and other stressors. AHRO also offers a “Chemotherapy and You” weekly class designed to help prepare patients and caregivers for treatment. This class also educates on side effects, management, and central line access.

AHRO offers a peer navigation program and a wig bank program, which connects patients who lose their hair with wigs through the American Cancer Society.

- **Outcomes 2019-2021:**
- In 2019, 145 patients served in support groups/25 patients were served in the Wig Bank Program.
- In 2020, 79 patients served in support groups/7 patients were served in the Wig Bank Program.
- In 2021, 129 patients served in support groups/18 patients served in the Wig Bank Program.

### **3. ACCESS TO BASIC NEEDS, SUCH AS HOUSING, JOBS, AND FOOD.**

2)

**Street Nursing Program** – In 2019, Rideout Health initiated a street nursing program to bring healthcare services to the growing homeless population in Yuba and Sutter Counties. Well over 1,000 people are living in tents or in cars near our river’s edge. A social worker and a registered nurse are currently working at both Coordinated Entry sites providing care to the homeless population in our area. The Street Nursing Team consists of two Community Outreach Street Nurses and two Community Outreach Social Workers. This team provides medical screenings, tele-doc visits, case management services, and housing navigation to the homeless population in the Yuba and Sutter Communities. The Street Nurse team does outreach with several of the above identified partner agencies in the streets and river bottoms of the Yuba Sutter Communities. Other outreach locations include Hands of Hope, The Life Building Center, Better Ways, and Harmony Village.

- **Outcomes for 2019-2021:**
- New patient visits=1,083
- Follow-Up visits= 4,951
- Total monthly patient visits= 8,099
- Outreach visits= 3,133

**HOUSING NAVIGATOR:** In February 2021, to meet the housing needs of the community, the Community Well-Being Unit hired a Social Worker, Housing Navigator. This associate assists with the planning and coordinating of services, identifies individuals who are agreeable and suitable for housing based on income, budget, and compatibility. They will also assist with gathering items such as ID card, Social Security cards and proof of income. 6 MONTHS of post housing Case Management will then be provided for every housed individual.

- **Outcomes 2021:**
- 43 individuals housed in permanent housing
- 157 individuals housed in temporary hotels and or shelters.

**Street Nursing Social Worker:** In October 2021, the Well-Being (Street Nursing Team) expanded and hired a Social Worker who provides case management in the field. This SW will partner with the RNs to

assist in connecting individuals to community resources and to provide emotional support and coping skills.

- **Outcomes 2021:**
- 18 connections to employment
- 319 connected to transportation
- 41 assisted with obtaining phones
- 49 assisted with obtaining Medi-Cal
- 633 connections to community resources

**Community Outreach Mobile Van:** The community outreach van arrived on November 22, 2021. The van will offer basic health care services, triage and screening, checkups, wound care, immunizations, social services, resources and community referrals to underserved populations. Patients will be provided care regardless of insurance or their ability to pay. Due to some technical challenges with the lift on the van, it has been in and out of the shop for service which has hindered some days of use.

- **Outcomes 2021:**
- 14 outreach visits including one wound care visit.

#### **4. ACCESS AND FUNCTIONAL NEEDS.**

**Transportation:** Access to transportation services is a large barrier and need in the primary service area. Adventist Health and Rideout currently address this need by offering free provisions such as gas cards, bus passes, and taxi vouchers. In 2021, we expanded our services by contracting with SP+ to provide transportation services to patients upon hospital discharge, transportation to and from primary care and oncology appointments, and transportation to social service appointments. This service is provided at no cost to the patients.

- **Outcomes**
- (2019-2021) 11,291 patients served

#### **5. ACCESS TO QUALITY PRIMARY CARE SERVICES.**

**Meds to Beds Program** – Adventist Health and Rideout is among many hospitals nationwide that has a “Meds-to-Beds” program, in which prescription drugs are given directly to patients just before they are sent home from the hospital or emergency room. This program serves as more than just a convenience; for some patients, this is the only way they will obtain necessary medications for chronic medical conditions and other required treatments. AHRO is not allowed to bill for medications that will be used at home; these drugs must come from an outpatient pharmacy. In order to bridge this gap, AHRO partnered with the Sutter Pharmacy for both discharge counseling and dispensing medications. In situations where the patient is unable to pay for the critical medications, Adventist Health and Rideout will pay for the medications.

- **Outcomes 2020-2021:**
- Total patients served=235

**Continuous Recruitment** –Adventist Health and Rideout continues to recruit primary care physicians and mid-level providers (nurse practitioners and physician assistants) to the Yuba-Sutter area.

- Internal Recruitment Event “Draft Day”- This is a day for Rideout associates to learn about professional development opportunities within the organization.
- RN Recruitment events with sign-on bonuses.
- Provider Recruitment remains at the top of the list and AHRO is dedicated to recruiting providers that provide quality care and embody the mission of living God’s love by inspiring health, wholeness, and hope.

## **6. ACCESS TO SPECIALTY AND EXTENDED CARE SERVICES.**

**Expanded Clinics and Specialty Care:** Adventist Health and Rideout Clinics has opened, enhanced, or added new specialty care physicians to our clinics. These new physicians now provide patient care at:

- AHRO Interventional Cardiology Clinic
- AHRO Women’s Health Clinic
- AHRO Vascular Clinic
- AHRO Orthopedics Clinic
- AHRO Primary Care Clinic
- AHRO Urology Clinic
- AHRO General and Bariatric Surgery Clinic

## **7. ACTIVE LIVING AND HEALTHY EATING.**

**3)**

**Blue Zones:** It all started when researchers found the five places around the world where people live to be 100. While each of those places was quite unique, they did share some commonalities that prove that your environment has a major impact on your longevity, as well as your quality of life. At Adventist Health, we are integrating this research and knowledge into the environment of our workplace while we also work to make meaningful changes in the communities we serve.

Adventist Health and Rideout is working with Blue Zones at all levels of well-being (individual, organizational, and community). This work will widen our impact as a hospital system to reach people long before they ever need treatment. Adventist Health is changing the way communities live, work and play.

The Blue Zones team started in January 2022, in the months coming, community meetings will start taking place and will include topics such as food and tobacco policies.

In addition to Blue Zones, Adventist Health and Rideout offers free classes on diabetes and other health issues in addition to providing various support groups. Adventist Health and Rideout will continue to promote and encourage healthy lifestyles.

- In 2020- the processes, recruitment and formation of the program got started.
- In 2021-The following positions were filled: Executive Director, Senior Events and Office Specialist, (2) Organization Leads, Engagement Lead, and a Public Policy Advocate.

**Rideout Healthy Kids:** We offer our free Adventist Health and Rideout Healthy Kids School Assemblies for K-8th grade students in Yuba, Sutter and Colusa counties. This program provides health education to elementary and middle school children in an interactive musical theater performance. Due to Covid-19, the performances were video recorded and presented to students, faculty, staff and community members at public and private schools, community health fairs and other events, service clubs, banquets, and many other community activities, bringing the message of good health, wellness, and encouragement to audiences young and old.

- **Outcomes 2020-2021:**
- 2019: 5,710 persons served
- 2020-2021: Due to Covid-19, all performances were video recorded and presented electronically. Approximately 75,000 persons were served.

4)

8. **SAFE AND VIOLENCE FREE ENVIRONMENT-** Adventist Health and Rideout is committed to the health and safety of our associates, patients, and our visitors. In response to the 2019, CHNA report. We have identified areas to improve safety and

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**SART Program:** Rideout Health aids the Rideout Emergency Department Sexual Assault Response Team (SART) for equipment and training to help women of assault crimes. Rideout Health collaborates with law enforcement and Women's Advocacy Groups to establish the Yuba Sutter Sexual Assault Response Team.

- Outcomes: As of this report, no outcomes are available.



## Appendix B – Impact of Actions Taken by Sutter Surgical Hospital North Valley

### ACCESS TO MENTAL/BEHAVIORAL/SUBSTANCE USE SERVICES

<b>Name of program/activity/initiative</b>	Fit Quest Program
<b>Description</b>	The Fit Quest Program is a comprehensive children’s wellness program focusing on improving nutrition, fitness, and mental wellness. The on-site school program, geared toward 5th and 6th grade students, teaches students easy ways to incorporate healthy choices into daily living. The curriculum is designed to improve overall health in a fun and meaningful way. The Fit Quest Program is incredibly impactful, reaching over 40 schools in Yuba and Sutter County, providing school assemblies and an expanded curriculum focus on nutrition, physical activity and mental wellness. The expanded curriculum and role modeling of and interactions with the Naturalists in choosing to drink water, and staying active have impacted over 2,400 students. Specialists have been engaged throughout the process attending assemblies and providing guidance and suggestions at planning meetings for continued enhancements in the Fit Quest Program. This program addresses multiple prioritized significant health needs, such as access to mental/behavioral/substance use services; access to disease and injury through knowledge, action and access to resources; and active living and healthy eating.
<b>Goals</b>	The goal of Fit Quest is to teach children healthy lessons about the importance of physical fitness, mental wellness and nutritious eating.
<b>Outcomes</b>	In 2019, there were 2,435 youth served through the program. In 2020, there were 1,102 youth served through the program. Please note, during COVID there was a temporary halt to services and shifted to a virtual format. In the first half of 2021, there were 853 youth served through the program. Please note, some schools were still impacted due to COVID and assemblies were conducted in a virtual format.

<b>Name of program/activity/initiative</b>	Fit Quest Family Camp
<b>Description</b>	Fit Quest Family Camp is a fun-filled weekend for the whole family, where both kids and parents experience healthy cooking classes; gardening; low-ropes challenge course; workshops on nutrition, mental wellness and physical activity; naturalist-led hikes and games; swimming; and an evening program. The program is available for up to 24 families annually and has components led by a PE specialist, Registered Dietician, Psychologist and Registered Yoga Therapist. This program addresses multiple prioritized significant health needs, such as access to mental/behavioral/substance use services; access to disease and injury through knowledge, action and access to resources; and active living and healthy eating.

<b>Goals</b>	The goal of Fit Quest Family Camp is to teach children and their families healthy lessons about the importance of physical fitness, mental wellness and nutritious eating.
<b>Outcomes</b>	In 2019, there were 151 adults served through the family in addition to the youth. In 2020, there were 84 adults served through the family in addition to the youth. Please note, during COVID there was a temporary halt to services and accommodations needed to be made to conduct the family camp in a safe manner. In first half of 2021, there were 53 adults served through the family in addition to the youth. Please note, during COVID accommodations needed to be made to conduct the family camp in a safe manner.

<b>Name of program/activity/initiative</b>	Counseling for People Experiencing or At-Risk for Homelessness
<b>Description</b>	Funding will allow clients experiencing or at-risk for homelessness, whom do not have California Health and Wellness and Blue Shield to have access to counseling with licensed mental health professionals. Counseling is offered at two locations in a private office allowing clients to work one on one with a counselor. Counselors determine the frequency of counseling services with each client and help to connect them with any needed outside resources the counselor determines is needed.
<b>Goals</b>	The goal is to provide counseling services to all clients requesting assistance who are experiencing or at-risk for homelessness. By providing counseling with licensed mental health professionals, clients can overcome personal concerns and better their quality of life, with the goal of reintegrating into the community.
<b>Outcomes</b>	In 2019, 64 clients received 240 counseling sessions and 129 service referrals to community resources. In 2020, 33 clients received 68 counseling sessions and 27 service referrals to community resources. Please note, due to COVID, services temporarily stopped. In the first half of 2021, 20 clients received 59 counseling sessions. Please note, numbers continued to be lower than usual because of effects of COVID.

## PREVENTION OF DISEASE AND INJURY THROUGH KNOWLEDGE, ACTION AND ACCESS TO RESOURCES

<b>Name of program/activity/initiative</b>	Women's Health Screenings and Mammograms
<b>Description</b>	In honor of Breast Cancer Awareness month, Sutter Medical Foundation – North offers no-cost mammograms and women's health screenings. This program remains a key initiative for SSHNV and a cornerstone event for the entire Yuba/Sutter community. This program addresses multiple

	prioritized significant health needs, such as access to disease and injury through knowledge; and access to quality primary care health services.
<b>Goals</b>	The goal of the screening event is to provide no-cost mammograms and health screenings for women who otherwise wouldn't have access to one, due to no insurance or a high, unaffordable deductibles.
<b>Outcomes</b>	In 2019, 85 of mammograms and 78 of women's health screenings were provided. In 2020, 40 of mammograms and 48 of women's health screenings were provided. In 2021, 51 of mammograms and 63 of women's health screenings were provided.

<b>Name of program/activity/initiative</b>	Primary Care Program – HPV Vaccinations
<b>Description</b>	The Primary Care program provides services and education of HPV vaccinations to prevent cervical cancer. Patients will be connected to discuss findings and receive follow up care. This program addresses multiple prioritized significant health needs, such as access to disease and injury through knowledge, and access to quality primary care health services.
<b>Goals</b>	Funding will allow for the implementation of 5 HPV vaccination strategies. HPV vaccinations will target 11-12-year-old boys and girls, the American Cancer Society and CDC recommended age.
<b>Outcomes</b>	The program began in 2020. In 2020, the HPV 101: You are the Key Webinar reached 50 individuals. In addition, 2 Community HPV Webinars and 2 Provider HPV Webinar reached over 900 providers/individuals. Please note, due to COVID many services were halted due to medical providers not having the capacity to take on more beyond patient care. The program concluded at the end of 2020.

<b>Name of program/activity/initiative</b>	Primary Care Program – Colorectal Screenings
<b>Description</b>	The Primary Care Program will provide services and education of colorectal screenings. Patients will be connected to discuss findings and receive follow up care. This program addresses multiple prioritized significant health needs, such as access to disease and injury through knowledge, and access to specialty and extended care.
<b>Goals</b>	Funding will allow for the engagement in colorectal cancer prevention strategies on 10 evidence-based interventions for colorectal cancer screenings. In addition, the program will host a colorectal cancer learning collaborative to share best practices and evidence-based interventions with health centers and stakeholders.
<b>Outcomes</b>	The program was slated to begin in 2020. Due to COVID-19 projects were halted as the health systems were under COVID-19 protocol and temporarily discontinued screening/vaccine programs. The program efforts concluded at the end of 2020.

<b>Name of program/activity/initiative</b>	Fit Quest Program
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<b>Description</b>	The Fit Quest Program is a comprehensive children’s wellness program focusing on improving nutrition, fitness, and mental wellness. The on-site school program, geared toward 5th and 6th grade students, teaches students easy ways to incorporate healthy choices into daily living. The curriculum is designed to improve overall health in a fun and meaningful way. The Fit Quest Program is incredibly impactful, reaching over 40 schools in Yuba and Sutter County, providing school assemblies and an expanded curriculum focus on nutrition, physical activity and mental wellness. The expanded curriculum and role modeling of and interactions with the Naturalists in choosing to drink water, and staying active have impacted over 2,400 students. Specialists have been engaged throughout the process attending assemblies and providing guidance and suggestions at planning meetings for continued enhancements in the Fit Quest Program. This program addresses multiple prioritized significant health needs, such as access to mental/behavioral/substance use services; access to disease and injury through knowledge, action and access to resources; and active living and healthy eating.
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<b>Goals</b>	The goal of Fit Quest Family Camp is to teach children and their families healthy lessons about the importance of physical fitness, mental wellness and nutritious eating.
<b>Outcomes</b>	In 2019, there were 151 adults served through the family in addition to the youth. In 2020, there were 84 adults served through the family in addition to the youth. Please note, during COVID there was a temporary halt to services and accommodations needed to be made to conduct the family camp in a safe manner. In first half of 2021, there were 53 adults served through the family in addition to the youth. Please note, during COVID accommodations needed to be made to conduct the family camp in a safe manner.

<b>Name of program/activity/initiative</b>	Mobile Fresh Food Program
<b>Description</b>	Funding will allow for the expansion of the Mobile Fresh Food Program to now deliver fresh produce to 60+ community housed in senior apartments/complexes in Yuba and Sutter Counties. In addition, funding will help purchase a cooling unit on the existing commercial van, supplement staffing for deliveries and program costs.
<b>Goals</b>	The goal of the Mobile Fresh Food program is to provide fresh produce to seniors and improve nutrition.
<b>Outcomes</b>	The program started in 2020. In 2020, 45,309 pounds of fresh produce was provided to 3,825 seniors. Program funding concluded at the end of 2020.
<b>Name of program/activity/initiative</b>	Food Rescue Program
<b>Description</b>	In partnership with Sutter Health, Yuba Sutter Food Bank will expand the food rescue program through replacement of a decommissioned truck. Distribution targets parts of Counties vapid of fresh fruit, vegetables, and other healthful whole foods, usually found in impoverished areas. Food is also distributed to over 30 partner agencies who support food access in Yuba and Sutter County through a variety of programs, including food pantries and hot meals.
<b>Goals</b>	The goal of the program is to recover an estimated 83,000 pounds of surplus food for distribution to nearly 8,000 people who have limited access to healthy foods will improve their overall health and well being.
<b>Outcomes</b>	In first half of 2021, 62,635 pounds of food reached over 13,089 (duplicated) people and 3,412 households.

## ACCESS TO BASIC NEEDS SUCH AS HOUSING, JOBS AND FOOD

<b>Name of program/activity/initiative</b>	Mobile Fresh Food Program
<b>Description</b>	Funding will allow for the expansion of the Mobile Fresh Food Program to now deliver fresh produce to 60+ community housed in senior apartments/complexes in Yuba and Sutter Counties. In addition, funding will help purchase a cooling unit on the existing commercial van, supplement staffing for deliveries and program costs.
<b>Goals</b>	The goal of the Mobile Fresh Food program is to provide fresh produce to seniors and improve nutrition.
<b>Outcomes</b>	The program started in 2020. In 2020, 45,309 pounds of fresh produce was provided to 3,825 seniors. Program funding concluded at the end of 2020.
<b>Name of program/activity/initiative</b>	COVID-19 Services – Meal Delivery Program
<b>Description</b>	Funding to increase food capacity to meet increased demand due to COVID, specifically used toward additional drivers, fuel, and emergency supplies.
<b>Goals</b>	The goal of the COVID-19 Services is to help meet the demand due to families/individuals being displaced or isolated as a result of the pandemic.

<b>Outcomes</b>	The program started in 2020. In 2020, 85,184 pounds of food was delivered to 6,577 through the meal delivery program. Program funding concluded at the end of 2020.
<b>Name of program/activity/initiative</b>	HOPE Now
<b>Description</b>	HOPE Now provides resources and case management to prevent individuals and families from reentering the cycle of homelessness in Yuba and Sutter Counties. The program provides 6 months of housing retention services for individuals successfully exiting The Salvation Army's emergency shelter program at the Depot Family Center, Rapid Rehousing (RRH) program, Hope Vista transitional housing facility and Campfire Disaster Care Program. Case management services include initial assessments of participants and establishing goals and formulating a sustainability plan for permanent housing and gainful employment. Each plan includes one-on-one case management, home visits, housing/employment navigation and service coordination.
<b>Goals</b>	The goal of the HOPE Now program is to provide case management to prevent clients from entering into the cycle of homelessness.
<b>Outcomes</b>	The program started in 2020. In 2020, 53 families received 102 support services, including 1,213 bed nights and 34 receiving permanent housing. Program funding concluded at the end of 2020.
<b>Name of program/activity/initiative</b>	Food Rescue Program
<b>Description</b>	In partnership with Sutter Health, Yuba Sutter Food Bank will expand the food rescue program through replacement of a decommissioned truck. Distribution targets parts of Counties vapid of fresh fruit, vegetables, and other healthful whole foods, usually found in impoverished areas. Food is also distributed to over 30 partner agencies who support food access in Yuba and Sutter County through a variety of programs, including food pantries and hot meals.
<b>Goals</b>	The goal of the program is to recover an estimated 83,000 pounds of surplus food for distribution to nearly 8,000 people who have limited access to healthy foods will improve their overall health and well being.
<b>Outcomes</b>	The program began in 2021. In first half of 2021, 62,635 pounds of food reached over 13,089 (duplicated) people and 3,412 households.

## ACCESS TO QUALITY PRIMARY CARE HEALTH SERVICES

<b>Name of program/activity/initiative</b>	Women's Health Screenings and Mammograms
<b>Description</b>	In honor of Breast Cancer Awareness month, Sutter Medical Foundation – North offers no-cost mammograms and women's health screenings. This program remains a key initiative for SSHNV and a cornerstone event for the entire Yuba/Sutter community. This program addresses multiple prioritized significant health needs, such as access to disease and injury through knowledge; and access to quality primary care health services.
<b>Goals</b>	The goal of the screening event is to provide no-cost mammograms and health screenings for women who otherwise wouldn't have access to one, due to no insurance or a high, unaffordable deductibles.

<b>Outcomes</b>	In 2019, 85 of mammograms and 78 of women's health screenings were provided. In 2020, 40 of mammograms and 48 of women's health screenings were provided. In 2021, 51 of mammograms and 63 of women's health screenings were provided.
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<b>Name of program/activity/initiative</b>	Primary Care Program – HPV Vaccinations
<b>Description</b>	The Primary Care program provides services and education of HPV vaccinations to prevent cervical cancer. Patients will be connected to discuss findings and receive follow up care. This program addresses multiple prioritized significant health needs, such as access to disease and injury through knowledge, and access to quality primary care health services.
<b>Goals</b>	Funding will allow for the implementation of 5 HPV vaccination strategies. HPV vaccinations will target 11-12-year-old boys and girls, the American Cancer Society and CDC recommended age.
<b>Outcomes</b>	The program began in 2020. In 2020, the HPV 101: You are the Key Webinar reached 50 individuals. In addition, 2 Community HPV Webinars and 2 Provider HPV Webinar reached over 900 providers/individuals. Please note, due to COVID many services were halted due to medical providers not having the capacity to take on more beyond patient care. The program concluded at the end of 2020.

## ACCESS TO SPECIALTY AND EXTENDED CARE

<b>Name of program/activity/initiative</b>	Primary Care Program – Colorectal Screenings
<b>Description</b>	The Primary Care Program will provide services and education of colorectal screenings. Patients will be connected to discuss findings and receive follow up care. This program addresses multiple prioritized significant health needs, such as access to disease and injury through knowledge, and access to specialty and extended care.
<b>Goals</b>	Funding will allow for the engagement in colorectal cancer prevention strategies on 10 evidence-based interventions for colorectal cancer screenings. In addition, the program will host a colorectal cancer learning collaborative to share best practices and evidence-based interventions with health centers and stakeholders.
<b>Name of program/activity/initiative</b>	Yolo Cares
<b>Description</b>	Newly funded program in 2020. YoloCares Program is comprehensive, 24/7, 360-degree, community-based palliative care (including behavioral health services, disease management and improved access to care) to patients throughout Yolo County. YoloCares serves as the primary care physician for YoloCares patients in need and will work with partners to coordinate care. Peer-to-peer education will be offered to area physicians about the YoloCares program to help create a streamlined continuum of care and referral process between YoloCares, Yolo Adult Day Health

	Center, CommuniCare, and Fourth & Hope through educational workshops. The program will work to expand the knowledge of palliative care, YoloCares services, and advance care planning through YoloCares workshops for our community faith leaders by holding advance care planning workings for community partners, the general public, and faith leaders. In addition, YoloCares' one-of-a-kind, caregiver relief program, Citizens Who Care (CWC) will provide caregiver relief through professionally trained volunteers.
<b>Goals</b>	The goal is to provide palliative care to low-income and homeless populations, as well as provide peer to peer education for how to access palliative care for patients.
<b>Outcomes</b>	In 2020, the program served 4 people with 98 services and connected to 15 community resources. Due to COVID, numbers were impacted. In the first half of 2021, the program served 1 person with 17 services. Due to continued COVID surges, numbers were impacted.

## ACTIVE LIVING AND HEALTHY EATING

<b>Name of program/activity/initiative</b>	Fit Quest Program
<b>Description</b>	The Fit Quest Program is a comprehensive children's wellness program focusing on improving nutrition, fitness, and mental wellness. The on-site school program, geared toward 5th and 6th grade students, teaches students easy ways to incorporate healthy choices into daily living. The curriculum is designed to improve overall health in a fun and meaningful way. The Fit Quest Program is incredibly impactful, reaching over 40 schools in Yuba and Sutter County, providing school assemblies and an expanded curriculum focus on nutrition, physical activity and mental wellness. The expanded curriculum and role modeling of and interactions with the Naturalists in choosing to drink water, and staying active have impacted over 2,400 students. Specialists have been engaged throughout the process attending assemblies and providing guidance and suggestions at planning meetings for continued enhancements in the Fit Quest Program. This program addresses multiple prioritized significant health needs, such as access to mental/behavioral/substance use services; access to disease and injury through knowledge, action and access to resources; and active living and healthy eating.
<b>Goals</b>	The goal of Fit Quest is to teach children healthy lessons about the importance of physical fitness, mental wellness and nutritious eating.
<b>Outcomes</b>	In 2019, there were 2,435 youth served through the program. In 2020, there were 1,102 youth served through the program. Please note, during COVID there was a temporary halt to services and shifted to a virtual format. In the first half of 2021, there were 853 youth served through the program. Please note, some schools were still impacted due to COVID and assemblies were conducted in a virtual format.

<b>Name of program/activity/initiative</b>	Fit Quest Family Camp
<b>Description</b>	Fit Quest Family Camp is a fun-filled weekend for the whole family, where both kids and parents experience healthy cooking classes; gardening; low-ropes challenge course; workshops on nutrition, mental



	wellness and physical activity; naturalist-led hikes and games; swimming; and an evening program. The program is available for up to 24 families annually and has components led by a PE specialist, Registered Dietician, Psychologist and Registered Yoga Therapist. This program addresses multiple prioritized significant health needs, such as access to mental/behavioral/substance use services; access to disease and injury through knowledge, action and access to resources; and active living and healthy eating.
<b>Goals</b>	The goal of Fit Quest Family Camp is to teach children and their families healthy lessons about the importance of physical fitness, mental wellness and nutritious eating.
<b>Outcomes</b>	In 2019, there were 151 adults served through the family in addition to the youth. In 2020, there were 84 adults served through the family in addition to the youth. Please note, during COVID there was a temporary halt to services and accommodations needed to be made to conduct the family camp in a safe manner. In first half of 2021, there were 53 adults served through the family in addition to the youth. Please note, during COVID accommodations needed to be made to conduct the family camp in a safe manner.
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## SAFE AND VIOLENCE FREE ENVIRONMENTS

<b>Name of program/activity/initiative</b>	Harm Reduction Coalition
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<b>Description</b>	The Yuba Sutter Healthcare Council created a Harm Reduction Coalition (HRC) to help with opioid crisis in the community. The HRC is assembled of community stakeholders to develop a plan for addressing opioid usage among clients and reducing deaths related to substance use.
<b>Goals</b>	The goals of the program are to partner with community organizations to develop a response plan and educate the community.
<b>Outcomes</b>	The program started in 2021. In 2021, there are 38 participating agencies with the Harm Reduction Coalition and the response plan is currently being developed.

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