2022
Community Health Needs Assessment

Sutter Health
Sutter Santa Rosa Regional Hospital

2022 Community Health Needs Assessment

Conducted on behalf of

Sutter Santa Rosa Regional Hospital
30 Mark West Springs Road
Santa Rosa, CA 95403

Conducted by

COMMUNITY HEALTH INSIGHTS

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Acknowledgments

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Community Health Insights (www.communityhealthinsights.com) conducted the assessment on behalf of Sutter Santa Rosa Regional Hospital. 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 (SHNs) of the Sutter Santa Rosa Regional Hospital (SSRRH) service area. 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.

Community Definition

The definition of the community served was the primary service area of the hospital, consisting of 36 ZIP Codes which make up Sonoma County. Located in Northern California, Sonoma County includes three distinct regions with 30 towns and cities, each with its own unique scenery. The Valleys and Vineyards region is known for its lush countryside and is home to 18 wine regions. The Redwoods and Rivers region includes wineries as well as redwood reserves with towering trees. The western edge of Sonoma County runs 55 miles along the Pacific Ocean and makes up the Coast region of the county.

Assessment Process and Methods

The data used to conduct the CHNA were identified and organized using the widely recognized Robert Wood Johnson Foundation's County Health Rankings model.[1] This model of population health includes many factors that impact and account for individual health and well-being. 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 16 community health experts, social service providers, and medical personnel. Furthermore, 21 community residents or community service provider organizations participated in 6 focus groups across the service area. Finally, 15 community service providers responded to a Community Service Provider (CSP) survey asking about health need identification and prioritization.

[1] Robert Wood Johnson Foundation, and University of Wisconsin, 2021. County Health Rankings Model. Retrieved 31 Jan 2022 from http://www.countyhealthrankings.org/.

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.

At the time that this CHNA was conducted, the COVID-19 pandemic was still impacting communities across the United States, including SSRRH's 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 COVID-19 impact was captured during 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 SHNs. 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. These PHNs were selected as SHNs. These SHNs 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.

List of Prioritized Significant Health Needs

The following SHNs identified for Sutter Santa Rosa Regional Hospital are listed below in prioritized order. For a full description of each health need, see the findings section of the main report.

1. Access to Basic Needs Such as Housing, Jobs, and Food
2. Access to Mental/Behavioral Health and Substance Use Services
3. Access to Quality Primary Care Health Services
4. Increased Community Connections
5. Injury and Disease Prevention and Management
6. Access to Specialty and Extended Care
7. Access to Dental Care and Preventive Services

Resources Potentially Available to Meet the Significant Health Needs

In all, 148 resources were identified in the service area that were potentially available to meet the identified SHNs. The identification method included starting with the list of resources from the 2019 CHNA, verifying that the resources still existed, and then adding newly identified

resources into the 2022 CHNA report. This resource list is not intended to be inclusive of all the resources available in Sonoma County.

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 SSRRH's service area and highlights the needs of community members living in parts of the county where the residents experience more 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 SHNs 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).[2]

This report documents the processes, methods, and findings of a CHNA conducted on behalf of Sutter Santa Rosa Regional Hospital (SSRRH), located at 30 Mark West Springs Road, Santa Rosa, CA 95403. SSRRH's primary service area is Sonoma County, which is comprised of 36 ZIP Codes. The total population of the service area was 507,669.

SSRRH is an affiliate of Sutter Health, a nonprofit healthcare system. The CHNA was conducted over a period of seven months, beginning in November 2021, and concluding in May 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) conducted the CHNA on the behalf of SSRRH. 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.

[2] Federal Register, Vol. 79, No. 250, (Wednesday, December 31, 2014). Department of the Treasury, Internal Revenue Service.

Findings

Prioritized Significant Health Needs

Primary and secondary data were analyzed to identify and prioritize the SHNs for the Sonoma County service area. Analysis of data resulted in seven SHNs meeting a threshold for inclusion as an outcome[3]. Primary data were then used to prioritize these SHNs. The PHN categories are organized in this way to facilitate examination by commonalities. The health needs are not mutually exclusive, and many characteristics of the health needs are drivers of or outcomes of other needs. Also, though other health needs exist in the Sonoma County area, the seven prioritized SHNs detailed in this CHNA are those where primary data clearly supports their focus as a priority.

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

Table 1: Health need prioritization inputs for SSRRH 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 Basic Needs Such as Housing, Jobs, and Food	93%	35%	80%
Access to Mental/Behavioral	93%	25%	80%

[3] Criteria set for the determination of a SHN for this assessment included: 1) two of the three following conditions; 2) 40% of the associated quantitative indicators were identified as performing poorly; 40% or more of the primary sources as performing poorly; and/or if it at least 40% of survey respondents indicated it was a need.

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
Health and Substance Use Services			
Access to Quality Primary Care Health Services	93%	14%	13%
Increased Community Connections	73%	11%	20%
Injury and Disease Prevention and Management	40%	4%	~
Access to Specialty and Extended Care	13%	1%	13%
Access to Dental Care and Preventive Services*	~	~	~

~ Health need not mentioned

* About 40% of survey respondents indicated that PHN 5 Access to Dental Care and Preventive Services is a health need in Sonoma County and quantitative data supported this as well. No key informant interview participants nor survey respondents ranked it as a top 3 priority among all needs, thus there are no proportions to mention above as Table 1 is ordered by prioritization.

These measures were 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.[4] The prioritization index values are shown in Figure 1 (next page), where health needs are ordered from highest priority at the top of the figure to lowest priority at the bottom.

[4] Further details regarding the creation of the prioritization index can be found in the technical section of this report.

Figure 1: Prioritized significant health needs for SSRRH 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.

SHNs are described below. As explained previously in the report, those secondary data indicators used in the CHNA that performed poorly compared to benchmarks are listed in the table below each significant health 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 Basic Needs Such as Housing, Jobs, and Food

Access to affordable and clean housing, stable employment, quality education, and adequate food for good health are vital for survival. Maslow's Hierarchy of Needs[5] 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 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.[6]

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
Housing and homelessness • More collective approaches to address generational poverty and generational homelessness. • Chronically homeless struggle with mental health and addiction. • Resolving homelessness includes meeting mental and physical needs. • Rehousing homeless in "a scattered site" home to reduce stigmatization. • Rate of homelessness in the county is incredibly high, higher than San Francisco. • Displacement is high, people are leaving the area because they can't afford housing. • High housing costs have resulted in overcrowding in many households.	• Lack of affordable housing is a significant issue in the area. • It is difficult to find affordable childcare. • Many people in the area do not make a living wage. • Many residents struggle with food insecurity. • The area needs additional low-

[5] McLeod, S. 2020. Maslow's Hierarchy of Needs. Retrieved 31 Jan 2022 from http://www.simplypsychology.org/maslow.html.

[6] 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.

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
• Improving homelessness requires more than permanent housing. It must also include. case-management support. • A disproportionate number of homeless camps in the Roseland area. • There is a need for robust eviction diversion programs with full-service case management support. Families • Preschool is unaffordable for most area families. • Increased investment in affordable early childhood education. • Cost of living has risen in Sonoma County, displacing many families. • Cost of living has made it difficult to keep educators in the county. Salary and wages of educators are not a match for housing costs. • Student engagement in schools is low. Lack of engagement is affecting graduation and post-graduation decisions. • Many systems of care in the county lack culturally and linguistically appropriate approaches when providing care. Income and Insurance • Many community members who are undocumented lack basic resources. • Lack of bilingual-bicultural staff or personnel in many organizations and agencies. • There is fear among the immigrant community, especially those who are undocumented, about accessing services. • Stronger worker protection for the Latino community is needed. • Lack of health insurance for many undocumented community members. • Wages in the county are low, in comparison to the cost of living.	income housing options. • Poverty in the county is high. • Services for homeless residents in the area are insufficient. • Educational attainment in the area is low. • Services are inaccessible for Spanish-speaking and immigrant residents. • Employment opportunities in the area are limited.

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
• People can't afford the basics: food, housing, transportation, healthcare • Not being able to meet some basic needs causes a lot of stress • There is a lack of access to higher education for low-income families. • Lack of access to healthy food is prominent in diverse communities, food insecurity a concern. • A deep need for a social safety net for those who are at the margins of financial insecurity. LGBTQ+ • Increase representation of LGBTQ+ populations in all sectors of service. • Need for improved treatment and care of LGBTQ+ in healthcare and social service systems. • Discrimination against LGBTQ+ populations is present in various sectors of the county. • Housing services are not typically presented in a culturally responsive manner for diverse community groups. • Transitional living center for LGBTQ youth, that's not Christian based, is needed in the county. • LGBTQ+ youth also are disproportionately unsheltered in the county. • Gender neutral bathrooms for the transexual community. • Need to educate the school boards and local elected officials to do non-performative anti-racist and justice, equity, diversity, and inclusion (JEDI) work. • Many providers feel that systems of care in the county are not designed by the people who use them. Other • Increased need for trauma informed providers who can rehabilitate and build trust with diverse communities.	

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
• The universities say they want more students of color, but many area high schools do not provide much support to achieve this goal. • Menstrual equity with free menstrual products in healthcare facilities and at public schools.	

Secondary Data Analysis
The following indicators performed worse in the service area when compared to state averages:
• Poor Mental Health Days • Frequent Mental Distress • Poor Physical Health Days • Frequent Physical Distress • Drug Induced Death • Limited Access to Healthy Foods • Food Environment Index • Medically Underserved Area • Homelessness Rate

2. 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	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
Substance use	• There aren't enough mental health providers or treatment centers in the

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
• Methamphetamine and fentanyl use in Sonoma County is high. • Substance use is a major barrier to provide services to those experiencing homelessness. • More sober living environments are needed. • Investment in improving homelessness in the county is needed by all area hospitals. • Rate of suicide disproportionately higher in diverse populations (Latino, Black). • County has experienced an increase in overdoses. • Substance use recovery: Need for more longer term treatment (greater than 30 days) and care for those experiencing mental illness. Youth and Young Adults • Increased suicides among younger populations. • Refugee trauma among kids in the county is high. • School violence (fights) has drastically increased in area schools. • Area youth are worried about housing, worried about where they are going to live, worried about their basic stability. • Mental health impacts of the pandemic are going to be long-term for youth. • Schools are being asked to provide mental health screening and acute crisis care without proper training.	area (e.g., psychiatric beds, therapists, support groups). • There aren't enough services here for those who are homeless and dealing with substance-use issues. • Additional services specifically for youth are needed (e.g., child psychologists, counselors, and therapists in the schools). • Substance-use is a problem in the area (e.g., use of opiates and methamphetamine, prescription misuse). • Additional services for those who are homeless and experiencing mental/behavioral health issues are needed. • There are too few substance-use treatment services in the area (e.g., detox centers, rehabilitation centers). • It's difficult for people to navigate for mental/behavioral healthcare. • The cost for mental/behavioral health treatment is too high. • The stigma around seeking mental health treatment keeps people out of care. • Substance-use is an issue among youth in particular. • Substance-use treatment options for those with Medi-Cal are limited. • Awareness of mental health issues among community members is low. • The area lacks the infrastructure to support acute mental health crises.

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
Providing care • Burnout of area mental health and behavioral health providers is a concern. • Need for more behavioral services for those experiencing homelessness. • Funding for services in the western portion of Sonoma County is lacking in order to meet mental health care needs. • Mental health systems of care are not aligned and coordinated. • Emergency rooms are not the location for behavioral health care. • Local community clinics and federally qualified health centers (FQHCs) see a disproportionate number of mental health needs with few places to refer. • Area mental health providers (especially psychiatrists) need to work to build trust with those with severe mental illness. • Wait times for treatment for the severely mentally ill are long, often 30 to 60 days. • Many area LGBTQ+ community members feel isolated, which leads to poor mental health and increased risk for substance use. • Need for more mental health mobile units. • Access to medications for treatment of mental illness is challenging in the county. • Lack of bilingual-bicultural mental health providers in the county. • Area fires in the last 5-6 years have left many families with trauma, resulting in high anxiety and depression.	• Treatment options in the area for those with Medi-Cal are limited. • The use of nicotine delivery products such as e-cigarettes and tobacco is a problem in the community. • Mental/behavioral health services are available in the area, but people do not know about them. • There are substance-use treatment services available here, but people do not know about them.

Secondary Data Analysis
The following indicators performed worse in the service area when compared to state averages:
• Suicide Mortality • Poor Mental Health Days • Frequent Mental Distress • Poor Physical Health Days • Frequent Physical Distress • Excessive Drinking • Drug Induced Death • Adult Smoking • Primary Care Shortage Area • Mental Health Care Shortage Area • Medically Underserved Area • Homelessness Rate

3. 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	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
Barriers to care • Lack of access to timely and affordable primary care in the county. • More community clinics for those with Medi-Cal are needed. • Wait times are long to access diagnostic testing in the county. Healthcare workforce • Increase the living wage for area healthcare providers to assure they can afford the cost of living in the county.	• Out-of-pocket costs are too high. • Patients have difficulty obtaining appointments outside of regular business hours. • Quality health insurance is unaffordable. • Specific services are unavailable here (e.g., 24-hour pharmacies, urgent care, telemedicine). • The quality of care is low (e.g., appointments are rushed,

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
• Health care staff retention problems in the county. Lost 50% of nurses in the last year in the county. • Staff at local FQHCs are burned out due to high need for care and lack of financial stability. • Need for full access reimbursement for telehealth. Disparities in care • Lack of access to culturally, linguistically appropriate primary health care services for the Spanish Speaking communities in Sonoma County. • It's a privilege to be able to access healthcare benefits or insurance in Sonoma County, it's not available to many working families in the area. • Increased competency of providers to understand how patient's identities (race, class, ability, income, gender, sexuality, etc.) affect their primary care needs. • Need many, many more Medi-Cal certified board and care facilities, especially with the aging population.	providers lack cultural competence). • There aren't enough primary care service providers in the area. • Wait-times for appointments are excessively long. • It is difficult to recruit and retain primary care providers in the region. • Patients seeking primary care overwhelm local emergency departments. • Primary care services are available but are difficult for many people to navigate. • Too few providers in the area accept Medi-Cal.

Secondary Data Analysis
The following indicators performed worse in the service area when compared to state averages:
• Stroke Mortality • Chronic Lower Respiratory Disease Mortality • Heart Disease Mortality • Cancer Mortality • Alzheimer's Disease Mortality • Poor Mental Health Days • Frequent Mental Distress • Poor Physical Health Days

Secondary Data Analysis
The following indicators performed worse in the service area when compared to state averages:
• Frequent Physical Distress • Colorectal Cancer Prevalence • Lung Cancer Prevalence • Primary Care Shortage Area • Medically Underserved Area • Homelessness Rate

4. 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."[7] 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 coordinate fashion, where individual organizations collaborate with others to build a network of care.

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
• Need for increased coordination between medical care and behavioral/mental health providers. • Integration of the educational system with health (physical and mental) care systems in the county will drastically improve care for youth in need. • Increase educators' communication and coordination with behavioral health clinicians	• There isn't enough funding for social services in the county. • Building community connections doesn't seem like a focus in the area. • City and county leaders need to work together.

[7] 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

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
to serve the needs of vulnerable youth more effectively. • Community health workers (CHWs) and Promotoras in the county help to bridge gaps between patients and providers. • Isolation due to the pandemic and fire related trauma increases the need for more CHWs and Promotoras in the area. • CHWs and Promotoras help to bring community members into mental health care and provide a "healing continuum." • More integration of culturally appropriate care for LGBTQ+ communities. • Increasing collaborative work in the county could bring in more resources and funding. • Notable examples of collaborative integrated approaches were seen during the COVID-19 pandemic.	• Health and social-service providers operate in silos; cross-sector connections needed. • Relations between law enforcement and the community need to be improved. • People in the community face discrimination from local service providers. • The community needs to invest more in the local public schools to improve opportunities for community involvement.

Secondary Data Analysis
The following indicators performed worse in the service area when compared to state averages:
• Stroke Mortality • Heart Disease Mortality • Suicide Mortality • Unintentional Injuries Mortality • Poor Mental Health Days • Frequent Mental Distress • Poor Physical Health Days • Frequent Physical Distress • Excessive Drinking • Drug Induced Death • Primary Care Shortage Area • Mental Health Care Shortage Area • Medically Underserved Area

Secondary Data Analysis
The following indicators performed worse in the service area when compared to state averages:
• Specialty Care Providers • Homelessness Rate

5. 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.

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
• Greater need for upstream investment in county services for greater prevention. • Increased prevention services for area children and families, including investment in improving parenting skills. • More prevention work in schools with financial compensation for their implementation. • Greater integration of schools with other county systems of care. • Increased investment of prevention in all areas. County approaches need to focus more on upstream factors related to current state of disease and injury. • Bring back suicide and drug education in schools. • Increased need for zoom training and internet access to facilitate connection of seniors with family members and care providers.	Survey respondents did not indicate this as a top priority health need.

Secondary Data Analysis
The following indicators performed worse in the service area when compared to state averages:
• Stroke Mortality • Chronic Lower Respiratory Disease Mortality • Heart Disease Mortality • Suicide Mortality • Unintentional Injuries Mortality • Alzheimer's Disease Mortality • Poor Mental Health Days • Frequent Mental Distress • Frequent Physical Distress • Excessive Drinking • Drug Induced Death • Adult Smoking • Homelessness Rate

6. Access to Specialty and Extended Care

Extended care services, which include specialty care, are care 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	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
• Need for more respite care placement options for area community members. • More adult day care placement options are needed. • More memory care or dementia placement options are needed in the county.	• It is difficult to recruit and retain specialists in the area. • Additional hospice and palliative care options are needed. • People have to travel to reach specialists. • The area needs more extended care options for the aging population (e.g., skilled nursing homes, in-home care).

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
• Surgeons able to provide gender affirming surgeries are lacking in the county. • Skilled nursing facilities are lacking and selective in their admissions. • Number of skilled nursing facilities in the county is inadequate to fill the need. • More Medi-Cal certified residential board and care facilities / residential care facilities are needed. • Some seniors in need of home care or residential care must leave the area to receive that care.	• Too few specialty and extended care providers accept Medi-Cal. • Wait-times for specialist appointments are excessively long.

Secondary Data Analysis
The following indicators performed worse in the service area when compared to state averages:
• Stroke Mortality • Chronic Lower Respiratory Disease Mortality • Heart Disease Mortality • Cancer Mortality • Alzheimer's Disease Mortality • Poor Mental Health Days • Frequent Mental Distress • Poor Physical Health Days • Frequent Physical Distress • Lung Cancer Prevalence • Drug Induced Death • Specialty Care Providers • Homelessness Rate

Although Access to Dental Care and Preventive Services was not ranked as a top 3 priority in primary data, as many as 48% of survey respondents stated it was a health need in the area and more than 40% of the quantitative indicators assigned to the health need performed poorly

against the state benchmark. This indicates that this SHN is present in Sonoma County, but when asked to rank it against other health needs, it does not rise to a top three priority.

7. Access to Dental Care and Preventive Services

Oral health is important for overall quality of life. When individuals have dental pain, it is difficult to eat, concentrate, and fully engage in life. Oral disease, including gum disease and tooth decay, are preventable chronic diseases that increase risk of other chronic disease. Oral health issues play a significant role in chronic absenteeism from school for children. Poor oral health status impacts the health of the entire body, especially the heart, digestive, and endocrine systems.

Primary Data Analysis	
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:	
Key Informant and Focus Group Responses	Community Service Provider Survey Responses
• Key informant interview and focus group participants did not mention dental care as a need in the county.	Survey respondents did not indicate this as a top priority health need.

Secondary Data Analysis
The following indicators performed worse in the service area when compared to state averages:
• Frequent Mental Distress • Poor Physical Health Days • Frequent Physical Distress • Homelessness Rate

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.[8] 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.

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. SSRRH requested written comments from the public on its 2019 CHNA and most recently adopted Implementation Strategy through its website.

At the time of the development of this CHNA report, SSRRH had not received written comments. However, input from the broader community was incorporated in the 2022 CHNA through key informant interviews, focus groups, and the Community Service Provider survey. SSRRH will continue to use its website 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 nine interviews (of which five were provided via a data sharing agreement with Kaiser Permanente) with 16 community health experts, six focus groups conducted with a total of 21 community residents or community-facing service providers, and 15 responses to the Community Service Provider 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 SHNs. Additionally, socioeconomic indicators were collected to

[8] Robert Wood Johnson Foundation, and University of Wisconsin, 2021. County Health Rankings Model. Retrieved 31 Jan 2022 from http://www.countyhealthrankings.org/.

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, 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 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 SHNs for Sonoma County. This included starting with 12 PHNs. These PHNs were those identified in previously conducted CHNAs.[9] Data were analyzed to discover which, if any, of the PHNs were present in Sonoma County. This identification occurred by coding (assigning) data to each health need and setting minimal thresholds for each health need described further below[10]. Tables 23 – 34 provide the coding mechanism used for both primary theme associations and secondary indicators to each specific PHNs. After these were identified, health needs were prioritized based on an analysis of primary data sources that described the PHN as a SHN. 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.

[10] Criteria set for the determination of a SHN for this assessment included: 1) two of the three following conditions; 2) 40% of the associated quantitative indicators were identified as performing poorly; 40% or more of the primary sources as performing poorly; and/or if it at least 40% of survey respondents indicated it was a need.

Description of Community Served

The definition of the community served was all of Sonoma County which was the primary service area of SSRRH.

Located in Northern California, Sonoma County includes three distinct regions with 30 towns and cities each with its own unique scenery. The Valleys and Vineyards region is known for its lush countryside and is home to 18 wine regions. The Redwoods and Rivers region includes wineries as well as redwood reserves with towering trees. The western edge of Sonoma County runs 55 miles along the Pacific Ocean and makes up the Coast region of the county. The total population of the service area was 507,669. The service area is shown in Figure 2.

Figure 2: Community served by SSRRH.

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 SSRRH service area.

ZIP Code	Total Population	% Non-White or Hispanic\Latinx	Median Age (yrs.)	Median Income	% Poverty	% Unemployment	% Uninsured	% Without High School	% With High Housing Costs	% With Disability
94515	7,491	37	46	$85,417	8.3	4.8	6.1	14.8	35.7	14
94922	1,075	30.9	39	$110,845	11	21	11	5.7	43.4	12
94923	808	6.6	67	$85,069	6.4	4.1	3.3	2.1	44	18
94928	44,323	39.6	35	$71,824	12	2.7	6.5	9	44.7	12
94931	8,926	22.9	38	$80,186	9.1	5.3	3.2	9	38.4	11
94951	4,574	33.3	53	$96,699	3.8	3.5	2.1	10.6	36.2	12
94952	35,503	26.2	44	$88,848	7.1	4.1	4.4	8.7	36.6	9.5
94954	38,763	33.3	41	$93,849	6.4	3.8	3.9	9.8	34.7	9
95401	38,839	48.4	37	$75,290	12	5	9	13.5	38.2	11
95403	45,096	46.7	37	$75,954	11	4	7.7	15.2	41.4	14
95404	40,497	33.8	42	$81,427	10	4.9	5.3	9.3	39.5	12
95405	21,082	23.2	46	$89,876	7.6	4.3	3.8	7.1	32.8	9.8
95407	42,026	69.3	33	$63,981	14	5.4	13	26.9	45.9	12
95409	27,186	25.8	53	$75,571	6.6	4.6	2.6	6.1	38.9	14
95412	397	44.6	56	$72,784	9.1	13	12	13.5	30.1	23
95421	1,808	16.3	56	$58,125	14	4.6	6.8	7.5	38.2	14
95425	10,984	36.8	42	$73,235	8.9	2.5	7.5	14.2	39.2	14
95430	7	0		~	0	0	0	0	0	100
95431	161	24.8	59	~	80		0	52		100
95436	6,240	17.9	51	$64,902	13	5.7	4.8	4.1	37.5	15
95439	728	64.6	39	~	43	8.1	0	26.9	53.2	10
95441	1,797	40.7	43	$100,938	11	2.4	7.8	17.6	23	9.3
95442	3,213	16.3	46	$135,000	7.5	1.9	1.7	0.8	33.9	8.5
95444	705	45.2	45	$64,028	0	11	0	6.6	33.1	11
95446	5,168	18.2	51	$65,784	11	5.7	5.6	7.7	44	17
95448	17,407	34	50	$95,114	8.1	3.1	6.9	9.1	35.7	12
95450	227	6.2	56	$59,350	4.8	16	0	0	50.4	12
95452	919	17.4	64	$81,118	12	0	5.7	0	40.4	12

ZIP Code	Total Population	% Non-White or Hispanic\Latinx	Median Age (yrs.)	Median Income	% Poverty	% Unemployment	% Uninsured	% Without High School	% With High Housing Costs	% With Disability
95462	1,124	11.7	53	$44,261	17	15	12	9.4	58.3	25
95465	2,244	16.8	52	$65,921	14	0.9	4.4	5.6	46.6	12
95471	573	9.8	43	~	23	10	1.9	0	58.9	20
95472	30,736	17.2	52	$92,674	6.9	5	5.3	5.9	34.2	13
95476	36,586	34.6	50	$82,036	7.9	4.5	5.1	11.3	40.2	14
95486	51	0	66	~	0	0	0	0	48.5	0
95492	29,271	41.5	41	$107,153	4	4.1	3.7	12.5	34.4	10
95497	1,134	17.3	66	$81,833	8.7	3.5	0	5.6	27	15
County	499,772	36.8	42	$81,018	9.2	4.4	6.1	11.2	38.9	12
California	39,283,497	62.8	37	$75,235	13	6.1	7.5	16.7	40.6	11

~ Data Not Available

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

Population race and ethnicity data for the counties in the service area are shown in Table 3 .

Table 3: Percent race and ethnicity profile for Sonoma County.

Race or Ethnic Group	Sonoma County Percent of Population
Non-Hispanic White	63.2%
Hispanic or Latinx	26.7%
Asian	4%
Black or African American	1.5%
American Indian and Alaska Native	0.5%
Native Hawaiian and Other Pacific Islander	0.3%
Some other race	0.4%
Two or more races	3.3%
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 mutual 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.*"[11]

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."[12]

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's clear that health inequities persist across communities, including Sonoma County.

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

Health Outcomes - The Results of Inequity

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

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[11] 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 .

[12] 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.

Table 4: Health outcomes comparing race and ethnicity in the SSRRH service area.

Health Outcomes	Description	American Indian\ Alaska Native	Asian	Black	Hispanic	White	Overall Sonoma County
Infant Mortality	Number of all infant deaths (within 1 year), per 1,000 live births.	~	~	~	2.9	3	3
Life Expectancy	Average number of years a person can expect to live.	78.3	87.4	79.4	86	81.6	82.2
Child Mortality	Number of deaths among children under age 18 per 100,000 population.	~	~	~	25.5	27	26.4
Premature Age-Adjusted Mortality	Number of deaths among residents under age 75 per 100,000 population (age-adjusted).	375.6	154.7	335.2	189.6	253.4	241.3
Premature Death	Years of potential life lost before age 75 per 100,000 population (age-adjusted).	8,236.8	2,984.2	6,916.1	3,701.1	5,216.6	4,802.8
Low Birthweight	Percentage of live births with low birthweight (< 2,500 grams).	10.4%	7.5%	7.3%	6.3%	5%	5.8%

~ Data Not Available

Data sources included in the technical section of the report.

Health outcome data by race and ethnicity reveal some clear inequities. The American Indian/Alaskan Native community, making up only .5% of the population of the county, has the

lowest life expectancy, highest premature age-adjusted mortality, highest premature death due to years of potential life lost, and highest percentage of low birthweight babies. Additionally, the Black community representing 1.5% of the county population have the second-lowest life expectancy, and the second highest rates of premature age-adjusted mortality and premature death due to years of potential life lost.

Health Factors - Inequities in the Service Area

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

Table 5: Health factors comparing race and ethnicity in the SSRRH service area.

Health Factors	Description	American Indian\ Alaska Native	Asian	Black	Hispanic	White	Overall
Some College[a]	Percentage of adults ages 25 and over with some post-secondary education.	54.1%	72.3%	68.2%	40.6%	78.6%	70%
High School Completion [a]	Percentage of adults ages 25 and over with at least a high school diploma or equivalent.	79.7%	88.9%	89.3%	64.6%	95.8%	88.8%
Third Grade Reading Level	Average grade level performance for 3rd graders on English Language Arts standardized tests	~	3.2	2.8	2.6	3.3	3
Third Grade Math Level	Average grade level performance for 3rd graders on math standardized tests	~	3.1	2.4	2.4	3.1	2.8
Children in Poverty	Percentage of people under age 18 in poverty.	9.2%	9.1%	19.7%	15.6%	5.9%	7.7%
Median Household Income	The income where half of households in a county earn more and half of households earn less.	$81,567	$85,992	$68,975	$67,701	$85,314	$87,084
Uninsured Population[b]	Percentage of the civilian non-institutionalized	10%	5.2%	9.3%	12.1%	3.5%	6.1%

Health Factors	Description	American Indian\ Alaska Native	Asian	Black	Hispanic	White	Overall
	population without health insurance.						

~ Data Not Available

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

[a]From 2019 American Community Survey 5-year estimates tables B15002, C15002B, C15002C, C15002D, C15002H, and C15002I.

[b]From 2019 American Community Survey 5-year estimates table S2701.

Examination of inequities in health factors by race and ethnicity revealed that Hispanic community members have the lowest percentages of college attainment, high school completion, third grade reading and math levels, highest percentage of children living in poverty, lowest median income and highest percentage of population that is uninsured.

Population Groups Experiencing Disparities

The figure below describes populations in the SSRRH 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 and reporting those mentioned five or more times. Figure 3 (next page) 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.

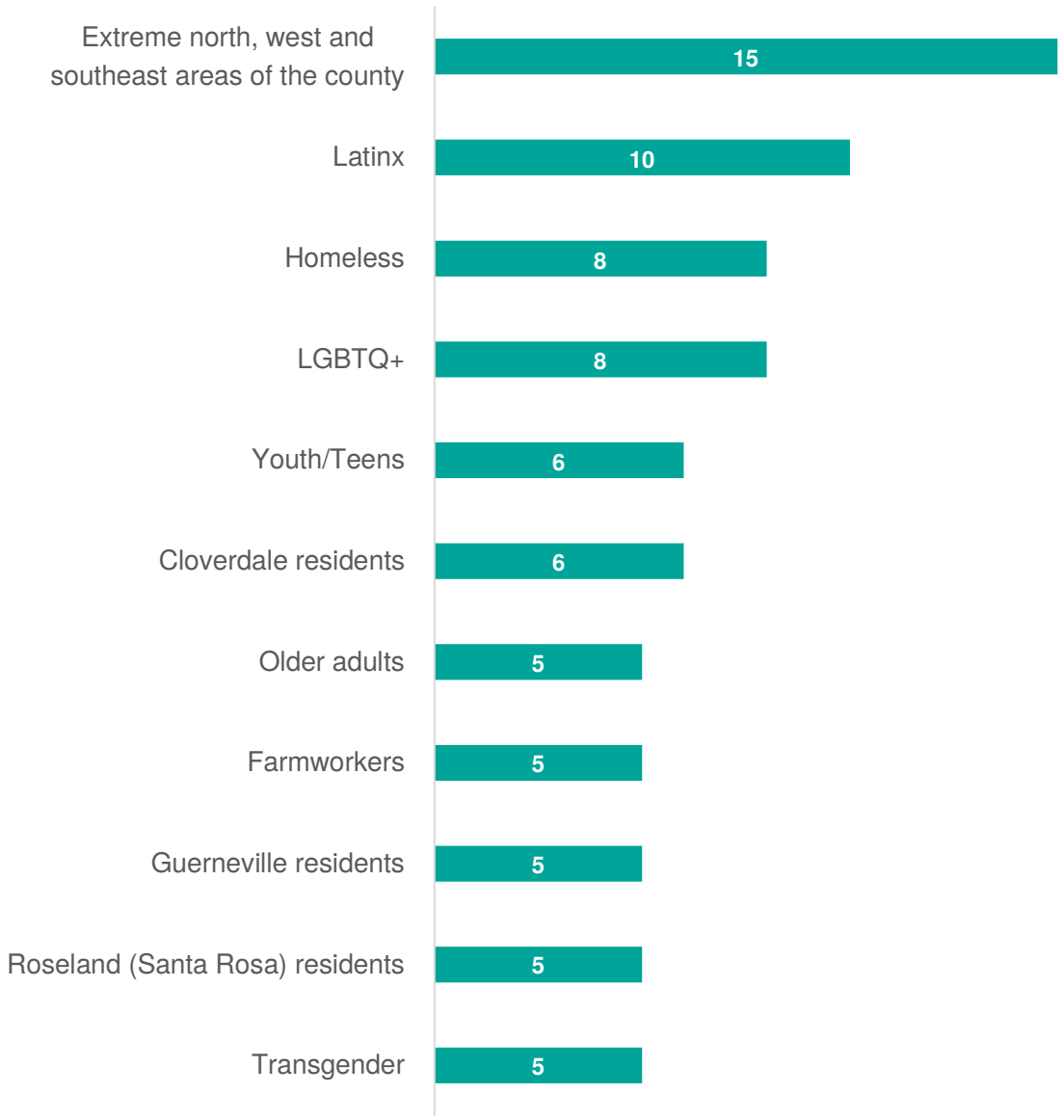


Figure 3: Populations experiencing disparities the SSRRH service area.

California Healthy Places Index

Figure 4 displays the California Healthy Places Index (HPI)[13] values for the SSRRH 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.

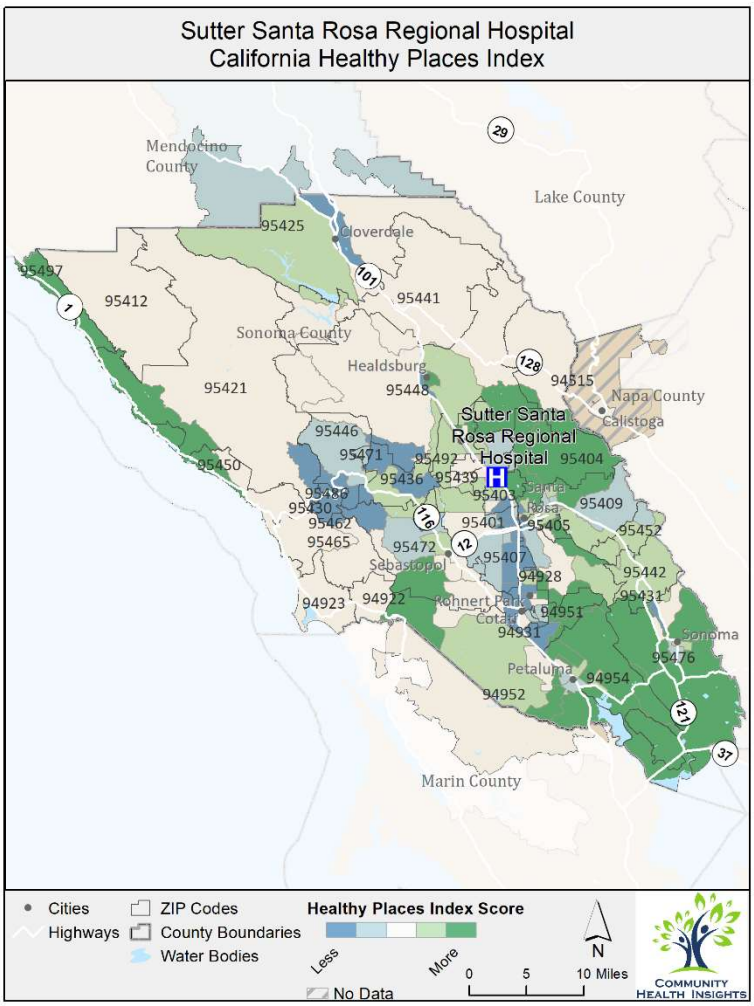


Figure 4: Healthy Places Index for SSRRH.

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

Areas with the darkest blue shading in Figure 4 have the lowest overall HPI scores, indicating factors leading to less healthy neighborhoods. These areas consist of the eastern portion of Cloverdale, north and south of the 116 corridor, portions of Sonoma, and central and southwestern portions of Santa Rosa, including Roseland, Rohnert Park and Cotati. There are likely to be a higher concentration of residents in these locations experiencing health disparities.

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 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 10 ZIP Codes that met the criteria to be classified as Communities of Concern. These are noted in Table 6, with the census population provided for each, and are displayed in Figure 5.

Table 6: Identified Communities of Concern for the SSRRH service area.

ZIP Code	Community\Area	Population
95401	Santa Rosa	38,839
95403	Santa Rosa	45,096
95404	Santa Rosa	40,497
95407	Roseland	42,026
95425	Cloverdale	10,984
95436	Forestville	6,240
95446	Guerneville	5,168
95462	Sheridan	1,124
95472	Sebastopol	30,736
95476	Sonoma	36,586
Total Population in Communities of Concern		*257,296*
Total Population in ZIP Codes of Sonoma County		*507,669*
Percentage of Service Area Population in Communities of Concern		*50.7%*

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

Figure 5 (next page) displays the ZIP Codes highlighted in pink that are Communities of Concern for the SSRRH service area.

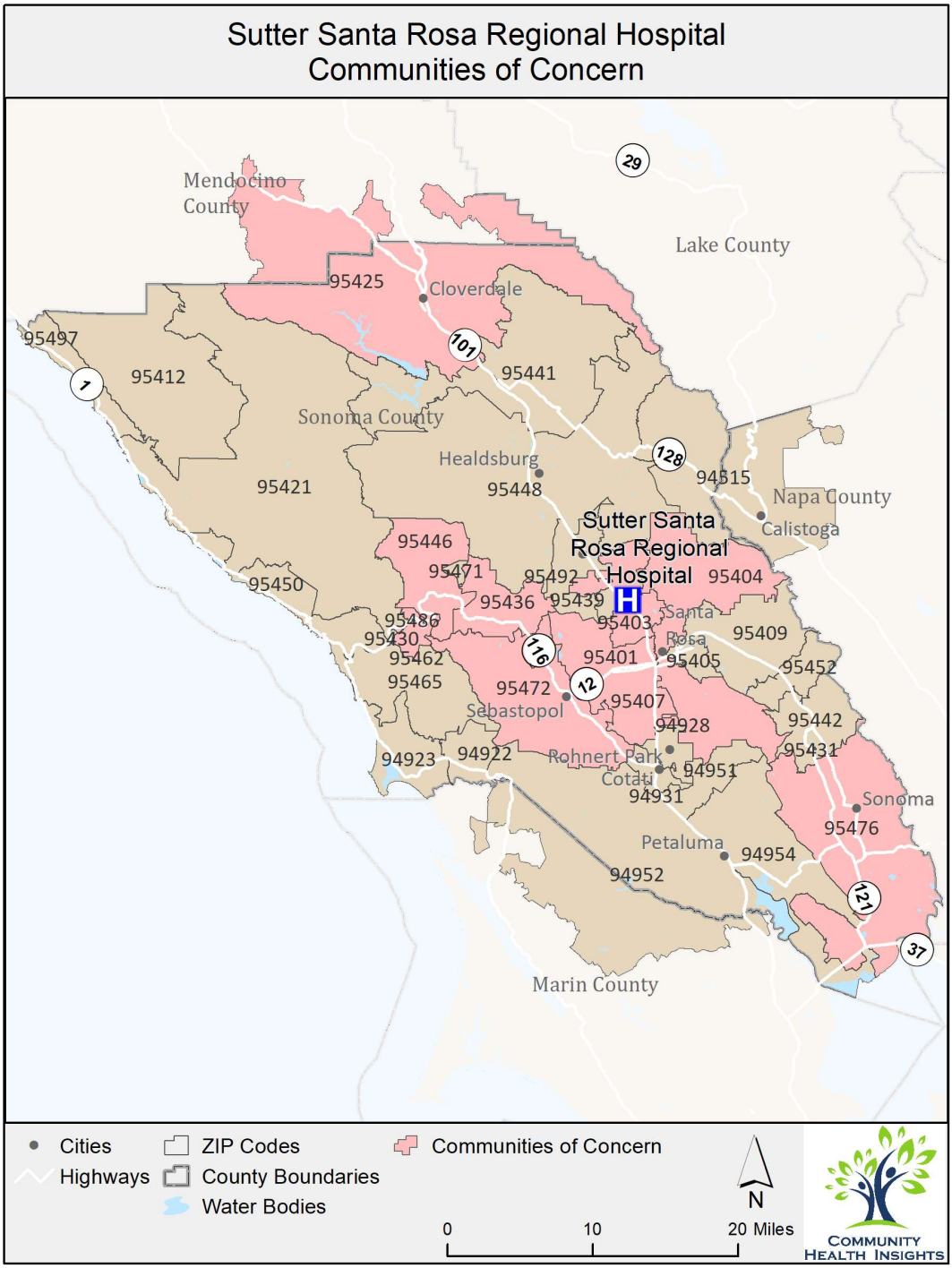


Figure 5: SSRRH Communities of Concern.

The Impact of COVID-19 on Health Needs

COVID-19 related health indicators for the service area Sonoma County, are noted in Table 7. Sonoma County COVID-19 data revealed lower COVID-19 mortality, case fatality and cumulative incidence than the state rates. The rate of COVID-19 full vaccination rates were also higher in Sonoma County than the state.

Table 7: COVID-19-related rates for the SSRRH service area.

Indicators	Description	Sonoma	California	
COVID-19 Mortality	Number of deaths due to COVID-19 per 100,000 population.	97.4	227.6	Sonoma: 97.4 California: 227.6
COVID-19 Case Fatality	Percentage of COVID-19 deaths per laboratory-confirmed COVID-19 cases.	0.6%	1.0%	Sonoma: 0.6% California: 1%
COVID-19 Cumulative Incidence	Number of laboratory-confirmed COVID-19 cases per 100,000 population.	17,004.3	21,861.1	Sonoma: 17,004.3 California: 21,861.1
COVID-19 Cumulative Full Vaccination Rate	Number of completed COVID-19 vaccinations per 100,000 population.	77,616.8	71,287.8	Sonoma: 77,616.8 California: 71,287.8

Note: COVID-19 data collected on April 28, 2022

Key informants and focus group participants were asked how the COVID-19 pandemic had impacted the health needs they described during interviews. Community survey 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 8.

Table 8: 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
• COVID-19 accelerated and intensified racial/ethnic disparities that were already there. • Housing issues and homelessness went up. • Educational and economic disparities increased. • There was a disruption to students when schools were shut down and went to distance learning. • Health care was deferred and important screenings were not conducted. • Access to health and mental health care became a big issue. • COVID-19 exacerbated chronic conditions, especially in the elderly. • The county struggled to provide needed services due to lack of funding and resources. • Overcrowded living conditions led to more COVID-19 infections. The importance of partnership between the county and service providers was highlighted. • Housing insecurity increased. • There was more demand for mental health services. • The pandemic revealed gaps in the social safety net, especially for low-income people with insecure housing arrangements. • Service workers were unable to work from home, and when they had to quarantine, they lost wages and could not pay bills. • People became stressed and unhealthy. • Workforce shortages started during the pandemic and continue. • Staff in health care, education, and community-based organizations were stressed and pushed to the point of burn out. • Kids were not getting their needs met when schools closed down and are struggling trying to catch up. • People of color were afraid to get vaccinated due to a lack of trust in the system. • Day care options became extremely limited, putting stress on working parents.	• Isolation is harming the mental health of community members. • Residents encounter economic hardships from lost or reduced employment. • Residents delay or forgo healthcare to limit their exposure to the virus. • Residents in the community are being evicted from their homes. • Youth no longer have ready access to the services they previously received at school (e.g., free/reduced-price lunch, mental and physical health services).

Key Informant and Focus Group Responses	Community Service Provider Survey Responses
• Isolation and mental health issues were exacerbated. • Food insecurity increased.	

Resources Potentially Available to Meet the Significant Health Needs

In all, 148 resources were identified in the SSRRH service area that were potentially available to meet the identified SHNs. These resources were provided by a total of 78 social service, nonprofit, and governmental organizations, agencies, and programs identified in the CHNA. The resource list is not intended to be comprehensive of all potentially available resources available in Sonoma County.. The identification method included starting with the list of resources from the 2019 Sutter Santa Rosa Regional Hospital CHNA, 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 SHN as shown in Table 9.

Table 9: Resources potentially available to meet significant health needs in priority order.

Significant Health Needs (in Priority Order)	Number of Resources
Access to Basic Needs Such as Housing, Jobs, and Food	27
Access to Mental/Behavioral Health and Substance Use Services	17
Access to Quality Primary Care Health Services	15
Increased Community Connections	60
Injury and Disease Prevention and Management	10
Access to Specialty and Extended Care	13
Access to Dental Care and Preventive Services	6
Total Resources	**148**

For more specific examination of resources by SHN 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 SHNs identified in the hospital facility's prior CHNA(s) (p. 78969)."[14] SSRRH invested in efforts to address the SHNs identified in the prior CHNA and these are detailed in Appendix A.

[14] Federal Register, Vol. 79, No. 250, (Wednesday, December 31, 2014). Department of the Treasury, Internal Revenue Service.

Conclusion

CHNAs play a key role in helping nonprofit hospitals and other community organizations determine where to focus community benefit and health improvement efforts, including targeting 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 data to collaborate on impactful community improvement projects.

2022 CHNA Technical Section

The following section presents a detailed account of data collection, analysis, and results for Sonoma County.

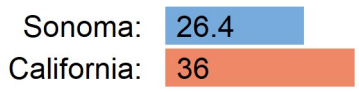
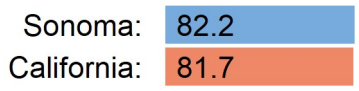
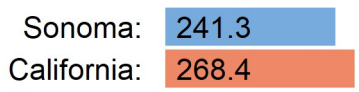
Results of Data Analysis

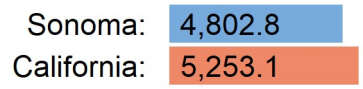
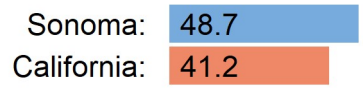
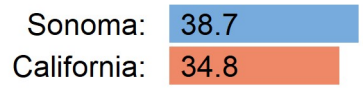
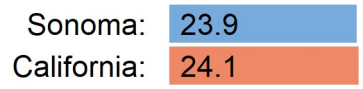
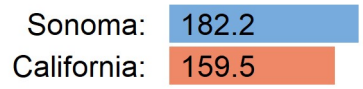
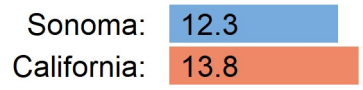
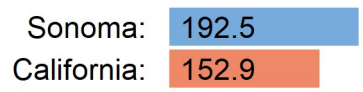
Compiled Secondary Data

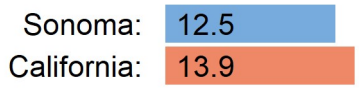
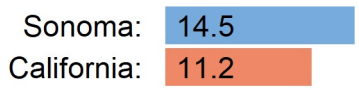
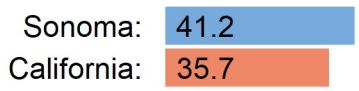
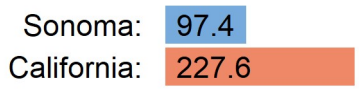
The tables and figures that follow show the specific values for the health need indicators used as part of the health need identification process. Indicator values for Sonoma County were compared to the California state benchmark and are highlighted below in grey when performance was worse in the county than in the state. The associated figures show rates for the county compared to the California state rates.

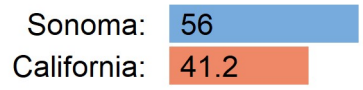
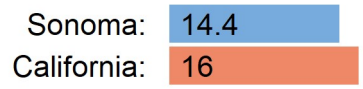
Length of Life

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

Indicators	Description	Sonoma	California	
Early Life				
Infant Mortality	Number of all infant deaths (within 1 year), per 1,000 live births.	3.0	4.2	
Child Mortality	Number of deaths among children under age 18 per 100,000 population.	26.4	36.0	
Life Expectancy	Average number of years a person can expect to live.	82.2	81.7	
Overall				
Premature Age-Adjusted Mortality	Number of deaths among residents under age 75 per 100,000	241.3	268.4	

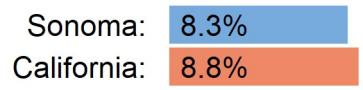
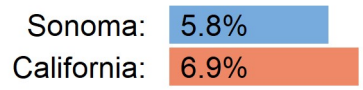
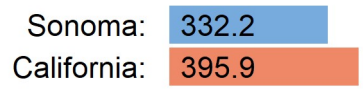
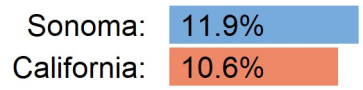
Indicators	Description	Sonoma	California	
	population (age-adjusted).			
Premature Death	Years of potential life lost before age 75 per 100,000 population (age-adjusted).	4,802.8	5,253.1	
Stroke Mortality	Number of deaths due to stroke per 100,000 population.	48.7	41.2	
Chronic Lower Respiratory Disease Mortality	Number of deaths due to chronic lower respiratory disease per 100,000 population.	38.7	34.8	
Diabetes Mortality	Number of deaths due to diabetes per 100,000 population.	23.9	24.1	
Heart Disease Mortality	Number of deaths due to heart disease per 100,000 population.	182.2	159.5	
Hypertension Mortality	Number of deaths due to hypertension per 100,000 population.	12.3	13.8	
Cancer, Liver, and Kidney Disease				
Cancer Mortality	Number of deaths due to cancer per	192.5	152.9	

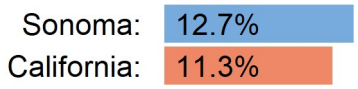
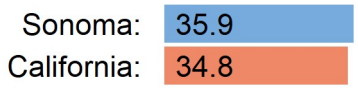
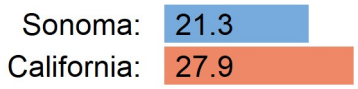
Indicators	Description	Sonoma	California	
	100,000 population.			
Liver Disease Mortality	Number of deaths due to liver disease per 100,000 population.	12.5	13.9	
Kidney Disease Mortality	Number of deaths due to kidney disease per 100,000 population.	6.3	9.7	
Intentional and Unintentional Injuries				
Suicide Mortality	Number of deaths due to suicide per 100,000 population.	14.5	11.2	
Unintentional Injuries Mortality	Number of deaths due to unintentional injuries per 100,000 population.	41.2	35.7	
COVID-19				
COVID-19 Mortality	Number of deaths due to COVID-19 per 100,000 population.	97.4	227.6	
COVID-19 Case Fatality	Percentage of COVID-19 deaths per laboratory-confirmed COVID-19 cases.	0.6%	1.0%	

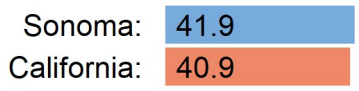
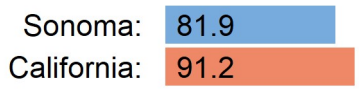
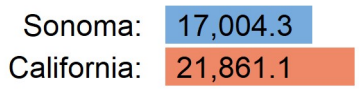
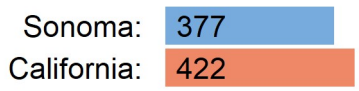
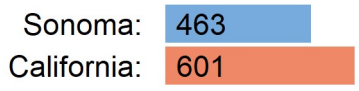
Indicators	Description	Sonoma	California	
Other				
Alzheimer's Disease Mortality	Number of deaths due to Alzheimer's disease per 100,000 population.	56.0	41.2	
Influenza and Pneumonia Mortality	Number of deaths due to influenza and pneumonia per 100,000 population.	14.4	16.0	

Quality of Life

Table 11: County quality of life indicators compared to state benchmarks.

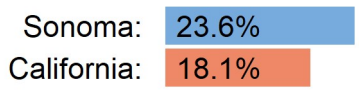
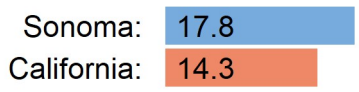
Indicators	Description	Sonoma	California	
Chronic Disease				
Diabetes Prevalence	Percentage of adults ages 20 and above with diagnosed diabetes.	8.3%	8.8%	
Low Birthweight	Percentage of live births with low birthweight (< 2,500 grams).	5.8%	6.9%	
HIV Prevalence	Number of people ages 13 years and older living with a diagnosis of human immunodeficiency virus (HIV) infection per 100,000 population.	332.2	395.9	
Disability	Percentage of the total civilian noninstitutionalized population with a disability	11.9%	10.6%	

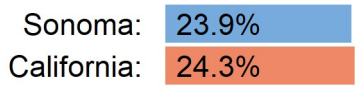
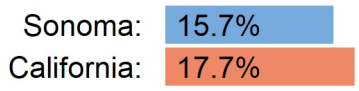
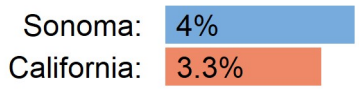
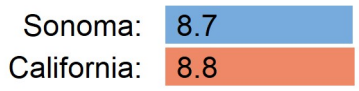
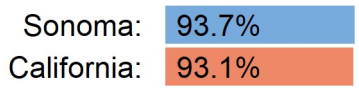
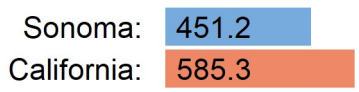
Indicators	Description	Sonoma	California	
Mental Health				
Poor Mental Health Days	Average number of mentally unhealthy days reported in past 30 days (age-adjusted).	4.3	3.7	
Frequent Mental Distress	Percentage of adults reporting 14 or more days of poor mental health per month (age-adjusted).	12.7%	11.3%	
Poor Physical Health Days	Average number of physically unhealthy days reported in past 30 days (age-adjusted).	4.0	3.9	
Frequent Physical Distress	Percentage of adults reporting 14 or more days of poor physical health per month (age-adjusted).	11.8%	11.6%	
Poor or Fair Health	Percentage of adults reporting fair or poor health (age-adjusted).	15.1%	17.6%	
Cancer				
Colorectal Cancer Prevalence	Colon and rectum cancers per 100,000 population (age-adjusted).	35.9	34.8	
Breast Cancer Prevalence	Female in situ breast cancers per 100,000 female population (age-adjusted).	21.3	27.9	

Indicators	Description	Sonoma	California	
Lung Cancer Prevalence	Lung and bronchus cancers per 100,000 population (age-adjusted).	41.9	40.9	
Prostate Cancer Prevalence	Prostate cancers per 100,000 male population (age-adjusted).	81.9	91.2	
COVID-19				
COVID-19 Cumulative Incidence	Number of laboratory-confirmed COVID-19 cases per 100,000 population.	17,004.3	21,861.1	
Other				
Asthma ED Rates	Emergency department visits due to asthma per 10,000 (age-adjusted).	377.0	422.0	
Asthma ED Rates for Children	Emergency department visits due to asthma among ages 5-17 per 10,000 population ages 5-17 (age-adjusted).	463.0	601.0	

Health Behavior

Table 12: County health behavior indicators compared to state benchmarks.

Indicators	Description	Sonoma	California	
Excessive Drinking	Percentage of adults reporting binge or heavy drinking (age-adjusted).	23.6%	18.1%	
Drug Induced Death	Drug induced deaths per	17.8	14.3	

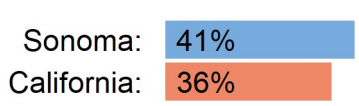
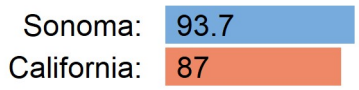
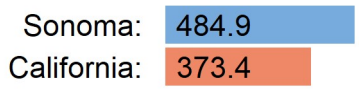
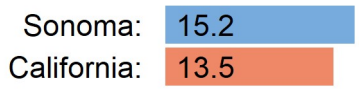
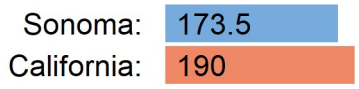
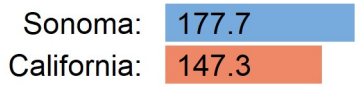
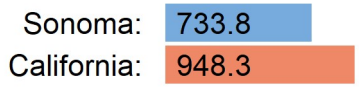
Indicators	Description	Sonoma	California	
	100,000 (age-adjusted).			
Adult Obesity	Percentage of the adult population (age 20 and older) that reports a body mass index (BMI) greater than or equal to 30 kg/m2.	23.9%	24.3%	
Physical Inactivity	Percentage of adults ages 20 and over reporting no leisure-time physical activity.	15.7%	17.7%	
Limited Access to Healthy Foods	Percentage of population who are low-income and do not live close to a grocery store.	4.0%	3.3%	
Food Environment Index	Index of factors that contribute to a healthy food environment, from 0 (worst) to 10 (best).	8.7	8.8	
Access to Exercise Opportunities	Percentage of population with adequate access to locations for physical activity.	93.7%	93.1%	
Chlamydia Incidence	Number of newly diagnosed chlamydia cases per 100,000 population.	451.2	585.3	

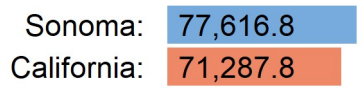
Indicators	Description	Sonoma	California	
Teen Birth Rate	Number of births per 1,000 female population ages 15-19.	10.5	17.4	Sonoma: 10.5 California: 17.4
Adult Smoking	Percentage of adults who are current smokers (age-adjusted).	12.9%	11.5%	Sonoma: 12.9% California: 11.5%

Clinical Care

Table 13: County clinical care indicators compared to state benchmarks.

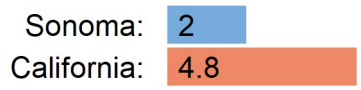
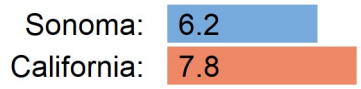
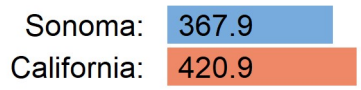
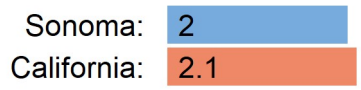
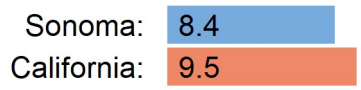
Indicators	Description	Sonoma	California	
Primary Care Shortage Area	Presence of a primary care health professional shortage area within the county.	Yes		Sonoma: Yes California:
Dental Care Shortage Area	Presence of a dental care health professional shortage area within the county.	No		Sonoma: No California:
Mental Health Care Shortage Area	Presence of a mental health professional shortage area within the county.	Yes		Sonoma: Yes California:
Medically Underserved Area	Presence of a medically underserved area within the county.	Yes		Sonoma: Yes California:

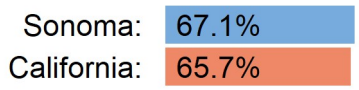
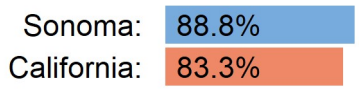
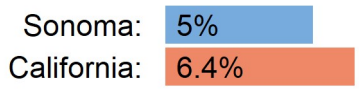
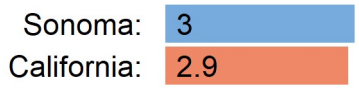
Indicators	Description	Sonoma	California	
Mammography Screening	Percentage of female Medicare enrollees ages 65-74 that received an annual mammography screening.	41.0%	36.0%	
Dentists	Dentists per 100,000 population.	93.7	87.0	
Mental Health Providers	Mental health providers per 100,000 population.	484.9	373.4	
Psychiatry Providers	Psychiatry providers per 100,000 population.	15.2	13.5	
Specialty Care Providers	Specialty care providers (non-primary care physicians) per 100,000 population.	173.5	190.0	
Primary Care Providers	Primary care physicians per 100,000 population + other primary care providers per 100,000 population.	177.7	147.3	
Preventable Hospitalization	Preventable hospitalizations per 100,000 (age-sex-	733.8	948.3	

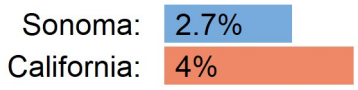
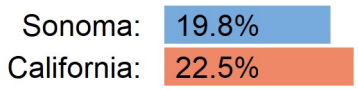
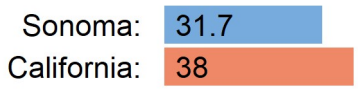
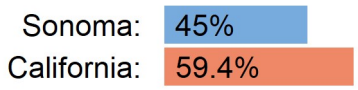
Indicators	Description	Sonoma	California	
	poverty adjusted)			
COVID-19				
COVID-19 Cumulative Full Vaccination Rate	Number of completed COVID-19 vaccinations per 100,000 population.	77,616.8	71,287.8	

Socio-Economic and Demographic Factors

Table 14: County socio-economic and demographic factors indicators compared to state benchmarks.

Indicators	Description	Sonoma	California	
Community Safety				
Homicide Rate	Number of deaths due to homicide per 100,000 population.	2.0	4.8	
Firearm Fatalities Rate	Number of deaths due to firearms per 100,000 population.	6.2	7.8	
Violent Crime Rate	Number of reported violent crime offenses per 100,000 population.	367.9	420.9	
Juvenile Arrest Rate	Felony juvenile arrests per 1,000 juveniles	2.0	2.1	
Motor Vehicle Crash Death	Number of motor vehicle crash deaths	8.4	9.5	

Indicators	Description	Sonoma	California	
	per 100,000 population.			
Education				
Some College	Percentage of adults ages 25-44 with some post-secondary education.	67.1%	65.7%	
High School Completion	Percentage of adults ages 25 and over with a high school diploma or equivalent.	88.8%	83.3%	
Disconnected Youth	Percentage of teens and young adults ages 16-19 who are neither working nor in school.	5.0%	6.4%	
Third Grade Reading Level	Average grade level performance for 3rd graders on English Language Arts standardized tests	3.0	2.9	
Third Grade Math Level	Average grade level performance for 3rd graders on math standardized tests	2.8	2.7	

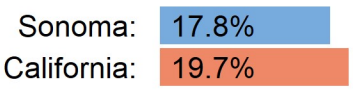
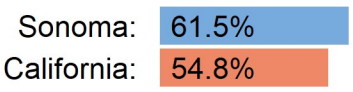
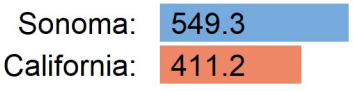
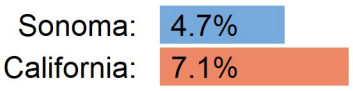
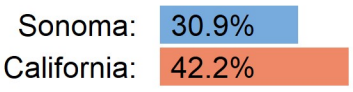
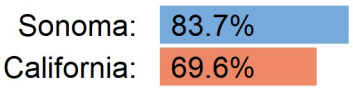
Indicators	Description	Sonoma	California	
Employment				
Unemployment	Percentage of population ages 16 and older unemployed but seeking work.	2.7%	4.0%	
Family and Social Support				
Children in Single-Parent Households	Percentage of children that live in a household headed by single parent.	19.8%	22.5%	
Social Associations	Number of membership associations per 10,000 population.	6.9	5.9	
Residential Segregation (Non-White/White)	Index of dissimilarity where higher values indicate greater residential segregation between non-White and White county residents.	31.7	38.0	
Income				
Children Eligible for Free Lunch	Percentage of children enrolled in public schools that are eligible for free	45.0%	59.4%	

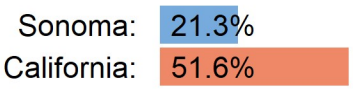
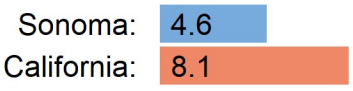
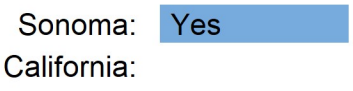
Indicators	Description	Sonoma	California	
	or reduced price lunch.			
Children in Poverty	Percentage of people under age 18 in poverty.	7.7%	15.6%	Sonoma: 7.7% California: 15.6%
Median Household Income	The income where half of households in a county earn more and half of households earn less.	$87,084.0	$80,423.0	Sonoma: $87,084 California: $80,423
Uninsured Population under 64	Percentage of population under age 65 without health insurance.	8.2%	8.3%	Sonoma: 8.2% California: 8.3%
Income Inequality	Ratio of household income at the 80th percentile to income at the 20th percentile.	4.3	5.2	Sonoma: 4.3 California: 5.2

Physical Environment

Table 15: County physical environment indicators compared to state benchmarks.

Indicators	Description	Sonoma	California	
Housing				
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, lack of kitchen	22.8%	26.4%	Sonoma: 22.8% California: 26.4%

Indicators	Description	Sonoma	California	
	facilities, or lack of plumbing facilities.			
Severe Housing Cost Burden	Percentage of households that spend 50% or more of their household income on housing.	17.8%	19.7%	
Home-ownership	Percentage of occupied housing units that are owned.	61.5%	54.8%	
Homelessness Rate	Number of homeless individuals per 100,000 population.	549.3	411.2	
Transit				
Households with no Vehicle Available	Percentage of occupied housing units that have no vehicles available.	4.7%	7.1%	
Long Commute - Driving Alone	Among workers who commute in their car alone, the percentage that commute more than 30 minutes.	30.9%	42.2%	
Access to Public Transit	Percentage of population living near a fixed public	83.7%	69.6%	

Indicators	Description	Sonoma	California	
	transportation stop			
Air and Water Quality				
Pollution Burden Percent	Percentage of population living in a census tract with a CalEnvirosceen 3.0 pollution burden score percentile of 50 or greater	21.3%	51.6%	
Air Pollution - Particulate Matter	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5).	4.6	8.1	
Drinking Water Violations	Presence of health-related drinking water violations in the county.	Yes		

Community Service Provider Survey Results

Table 16: Service Provider survey results for Sonoma County.

Service Provider Survey Snapshot | Sonoma County (N=15)	
Health Needs	**% Reporting**
Most Frequently Reported	
Access to Basic Needs Such as Housing, Jobs, and Food	93.3%
Access to Mental/Behavioral Health and Substance-Use Services	93.3%
Access to Specialty and Extended Care	60.0%
Active Living and Healthy Eating	60.0%
Top 2/ Priority (*Most Frequently Reported Characteristics*)	
Access to Basic Needs Such as Housing, Jobs, and Food	80.0%
Lack of affordable housing is a significant issue in the area.	
It is difficult to find affordable childcare.	
Many people in the area do not make a living wage.	
Many residents struggle with food insecurity.	
The area needs additional low-income housing options.	
Access to Mental/Behavioral Health and Substance Use Services	80.0%
There aren't enough mental health providers or treatment centers in the area (e.g., psychiatric beds, therapists, support groups).	
There aren't enough services here for those who are homeless and dealing with substance-use issues.	
Additional services specifically for youth are needed (e.g., child psychologists, counselors, and therapists in the schools).	
Substance-use is a problem in the area (e.g., use of opiates and methamphetamine, prescription misuse).	

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 6. 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.

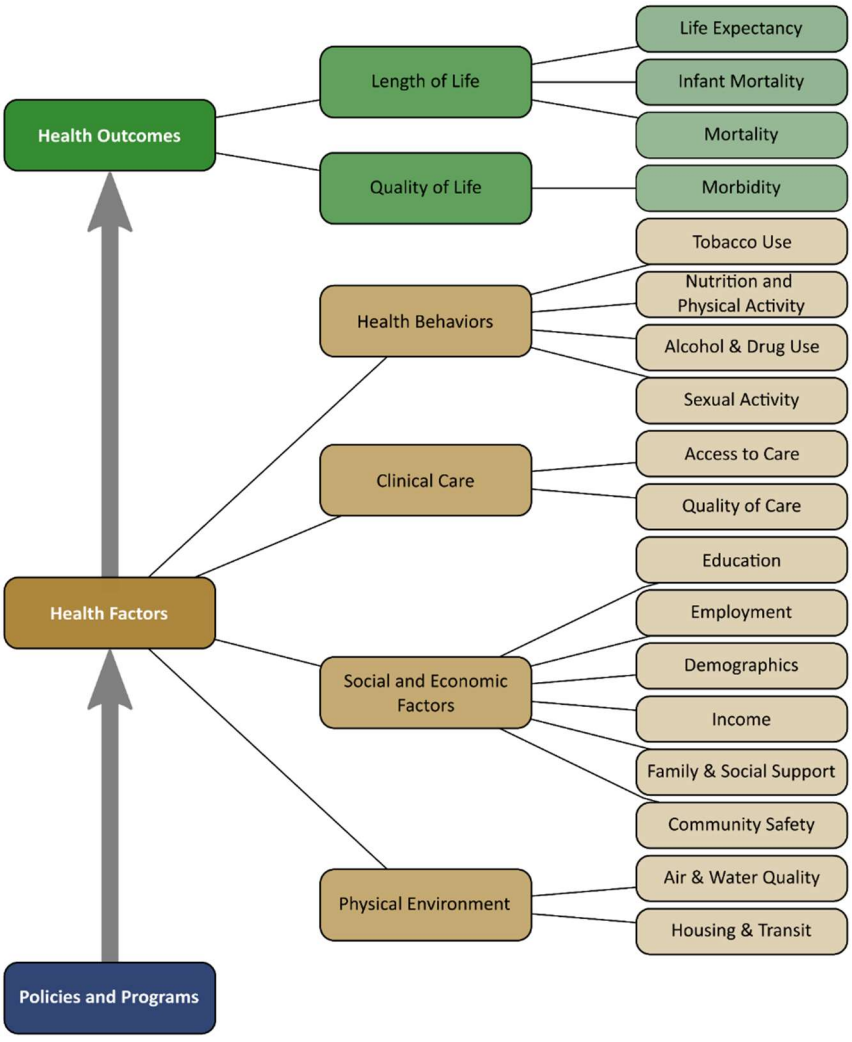


Figure 6: Community Health Assessment Conceptual Model as modified from the County Health Rankings Model, Robert Wood Johnson Foundation, and University of Wisconsin, 2015.

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 7 (next page) outlines the data collection and analysis stages of this process. The project began by confirming the HSA for Sutter Santa Rosa Regional 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 SHNs for the HSA. SHNs 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 hospital’s 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.

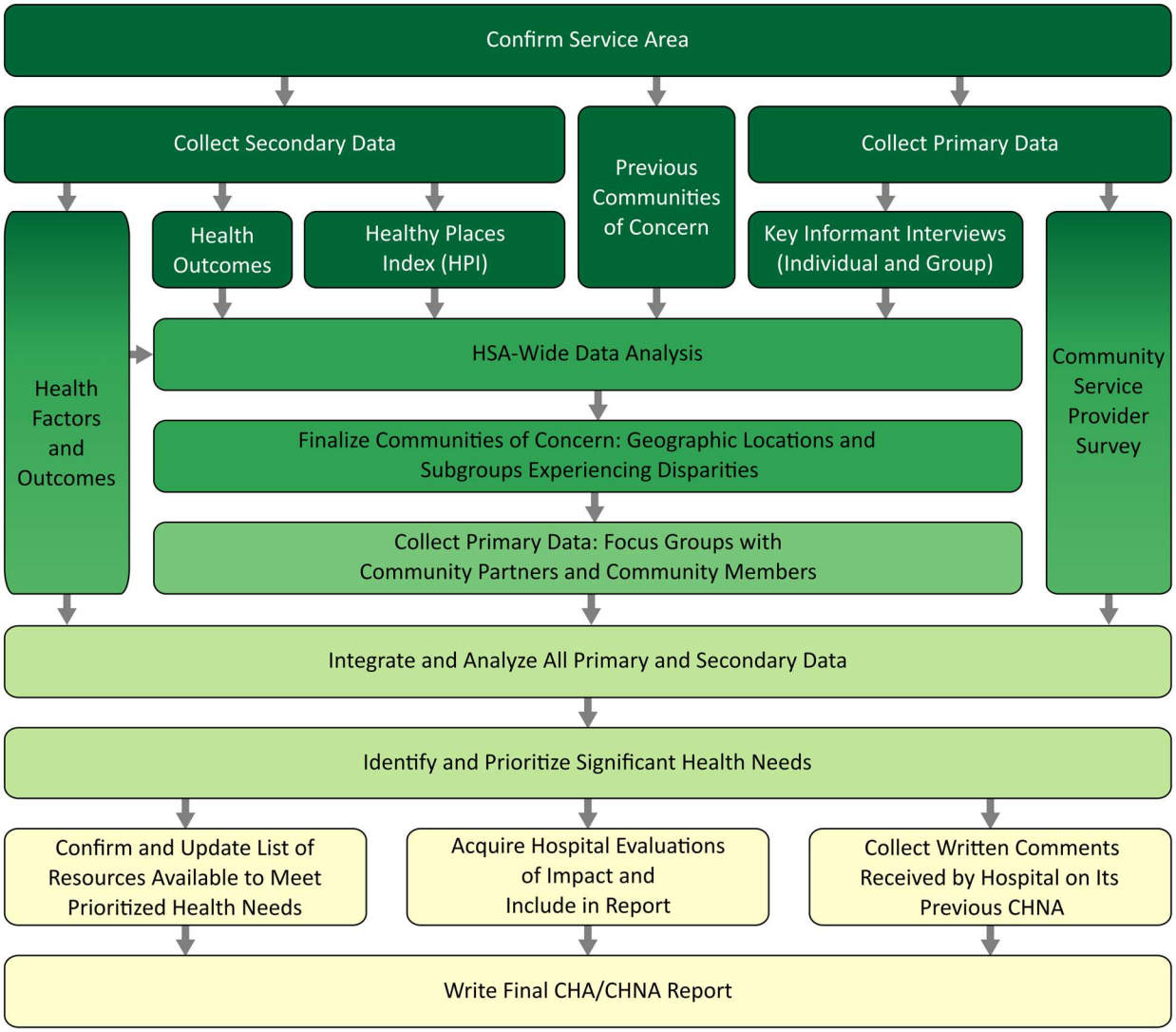


Figure 7: CHNA process model for SSRRH.

Primary Data Collection and Processing

Primary Data Collection

Input from the community served by Sutter Santa Rosa Regional Hospital 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. First, phase one began by interviewing area-wide service providers with knowledge of the service area, including input from the designated Public Health Department. 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 county. 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 17 contains a listing of community health experts, or key informants, which 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 17: Key informant list.

Organization	Date	Number of Participants	Area of Expertise	Populations Served
West County Community Services*	9/20/21	1	Access to basic needs; counseling	Older Adults
Committee on Temporary Shelter*	9/21/21	1	Housing and Homelessness	Unsheltered
Sonoma County Department of Health Services; Sonoma County Office of Equity*	11/5/21	2	COVID-Impacts	Sonoma County
Sonoma County Office of Education; Santa Rosa City Schools*	11/15/21	2	Education	Youth

Organization	Date	Number of Participants	Area of Expertise	Populations Served
Positive Images*	11/22/21	1	Support groups, training	LGBTQ+ Population
Redwood Community Health Coalition	02/14/2022	1	Healthcare	Low-income; Medi-Cal recipients
Behavioral Health Providers: Side by Side; Sonoma Co. Department of Health Services; Buckelew Programs Sonoma County	02/24/2022	3	Behavioral health	Sonoma County; youth 5 - 26; Spanish speaking community
Sutter Santa Rosa Regional Hospital Staff	02/25/2022	3	Healthcare	Sonoma County
Santa Rosa Community Health	03/07/2022	2	Healthcare	Sonoma County; Latinx/Hispanic; low-income; homeless/unhoused

*interviews provided by Kaiser Permanente, via Harder+Company, for this Sonoma County CHNA as a part of a data sharing agreement.

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. Added 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 or service providers living or 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 18 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 18: Focus group list.

Hosting Organization	Date	Number of Participants	Populations Represented
Latino Service Providers; Humanidad Therapy and Education Services	03/15/2022	2	Latinx
Catholic Charities; Community Support Network; Reach for Home; Committee on the Shelter less	03/21/2022	4	Homeless/unhoused or marginally housed
Latino Service Providers: Youth Promotores	03/25/2022	4	Latinx Youth 18 - 25
LGBTQ Connection	03/25/2022	4	LGBTQ
Corazon Healdsburg	03/30/2022	5	Latinx (Northern Sonoma County)
Drug Abuse Alternatives Center; West County Health Centers	03/31/2022	2	Adults/youth in need of substance use disorder services

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 PHN 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 SHNs.

Community Service Provider Survey

A web-based survey was administered to community service providers who delivered health and social services to community residents of the HSA. A list of community service providers affiliated with the nonprofit hospitals included in this report was used as an initial sampling frame. An email recruitment message was sent to these community service providers detailing the survey aims and inviting them to participate. Participants we also encouraged to forward the recruitment message to other community service providers in their networks. The survey was designed using Qualtrics, an online survey platform, and was available for approximately two weeks. 15 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:

Annemarie Brown, Melanie Hall, Cristina Larsen, Timothy Miller, Tina Panza, Nina Redman, Erica Vogel, and Donna Waldman

After providing socio-demographic information including the county they served and their affiliated organization(s), survey respondents were shown a list of 12 PHNs 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 SHNs 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, and 2) support the identification of health needs within the SSRRH 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),[15] derived from health factor indicators available at the US Census tract level, and mortality data from the California Department of Public Health (CDPH),[16] 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 19.

Table 19: 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

[15] 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.

[16] State of California, Department of Public Health. 2021. California Comprehensive Master Death File (Static), 2015-2019.

Cause of Death	ICD 10 Codes
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 specific 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, 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[17] were compared to ZCTA boundaries.[18] 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.[19] 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 exceedingly small populations. The difference between raw rates and EBRs in ZCTAs with exceptionally 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 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

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

[18] 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.

[19] 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

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 SHNs. The selection of these indicators was guided by the previously identified conceptual model. Table 20 lists these indicators, their sources, the years they were measured, and the health-related characteristics from the conceptual model they are primarily used to represent.

Table 20: 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	County Health Rankings	2016 - 2019
			Life Expectancy	County Health Rankings	2017 - 2019
			Premature Age-Adjusted Mortality	County Health Rankings	2017 - 2019
			Premature Death	County Health Rankings	2017 - 2019
		Mortality	Stroke Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Chronic Lower Respiratory Disease Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Diabetes Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Heart Disease Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Hypertension Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019

Conceptual Model Alignment			Indicator	Data Source	Time Period
			Cancer Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Liver Disease Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Kidney Disease Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Suicide Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Unintentional Injuries Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			COVID-19 Mortality	CDPH COVID-19 Time-Series Metrics by County and State	Collected on 2022-04-28
			COVID-19 Case Fatality	CDPH COVID-19 Time-Series Metrics by County and State	Collected on 2022-04-28
			Alzheimer's Disease Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
			Influenza and Pneumonia Mortality	CDPH California Vital Data (Cal-ViDa)	2015 - 2019
	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

Conceptual Model Alignment			Indicator	Data Source	Time Period
			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 2022-04-28
			Asthma ED Rates	Tracking California	2018
			Asthma ED Rates for Children	Tracking California	2018
Health Factors	Health Behavior	Alcohol and Drug Use	Excessive Drinking	County Health Rankings	2018
			Drug Induced Death	CDPH 2021 County Health Status Profiles	2017 - 2019
		Nutrition and Physical Activity	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

Conceptual Model Alignment			Indicator	Data Source	Time Period
		Sexual Activity	Chlamydia Incidence	County Health Rankings	2018
			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

Conceptual Model Alignment			Indicator	Data Source	Time Period
			COVID-19 Cumulative Full Vaccination Rate	CDPH COVID-19 Vaccine Progress Dashboard Data	Collected on 2022-04-28
	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
		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

Conceptual Model Alignment			Indicator	Data Source	Time Period
			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	2013 - 2017
			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
			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

Conceptual Model Alignment			Indicator	Data Source	Time Period
			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[20] 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 21.

Table 21: 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
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

[20] 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
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

CHR Indicator	Time Period	Data Source
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
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[21] 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.

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.

[21] 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/.

COVID-19 Data

Data on the cumulative number of cases and deaths[22] and completed vaccinations[23] 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[24] and report age-adjusted deaths per 100,000.

U.S. Heath Resources and Services Administration

Indicators related to the availability of healthcare providers were obtained from the Health Resources and Services Administration[25] (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

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[22] State of California, Department of Public Health. 2021. Statewide COVID-19 Cases Deaths Tests. Retrieved April 28 2022 from https://data.chhs.ca.gov/dataset/f333528b-4d38-4814-bebb-12db1f10f535/resource/046cdd2b-31e5-4d34-9ed3-b48cdbc4be7a/download/covid19cases_test.csv.

[23] State of California, Department of Public Health. 2021. COVID-19 Vaccine Progress Dashboard Data . Retrieved April 28 2022 from https://data.chhs.ca.gov/dataset/e283ee5a-cf18-4f20-a92c-ee94a2866ccd/resource/130d7ba2-b6eb-438d-a412-741bde207e1c/download/covid19vaccinesbycounty.csv.

[24] 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.

[25] 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.

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[26] 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-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.

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

Tracking California

Data on emergency department visits rates for all ages as well as children aged 5 to 17 were obtained from Tracking California.[27] 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[28] 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.[29] These data are reported as risk-adjusted rates per 100,000.

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

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

[29] 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/.

California Department of Justice

Data reporting the total number of juvenile felony arrests was obtained from the California Department of Justice.[30] 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 - 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[31] 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 were 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.

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[30] 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.

[31] 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.

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. 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,[32] so this was the data used to represent the distribution of population for this indicator.

Transit stop data were identified first by using tools in the TidyTransit[33] library for the R statistical programming language.[34] 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,[35] Transitland,[36] Transitwiki.org,[37] and Santa Ynez Valley Transit.[38] 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.

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[32] US Census Bureau. 2011. Census Blocks with Population and Housing Counts. Retrieved 7 Jun 2021 from https://www2.census.gov/geo/tiger/TIGER2010BLKPOPHU/.

[33] 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.

[34] 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/.

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

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

[37] 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.

[38] Santa Ynez Valley Transit. GTFS Files. Retrieved 1 Jun 2021 from http://www.cityofsolvang.com/DocumentCenter/View/2756/syvt_gtfs_011921.

The sf[39] 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 SHNs within the service area. Finally, primary data were used to prioritize those identified SHNs. The specific details for these analytical steps are given in the following three sections.

[39] 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

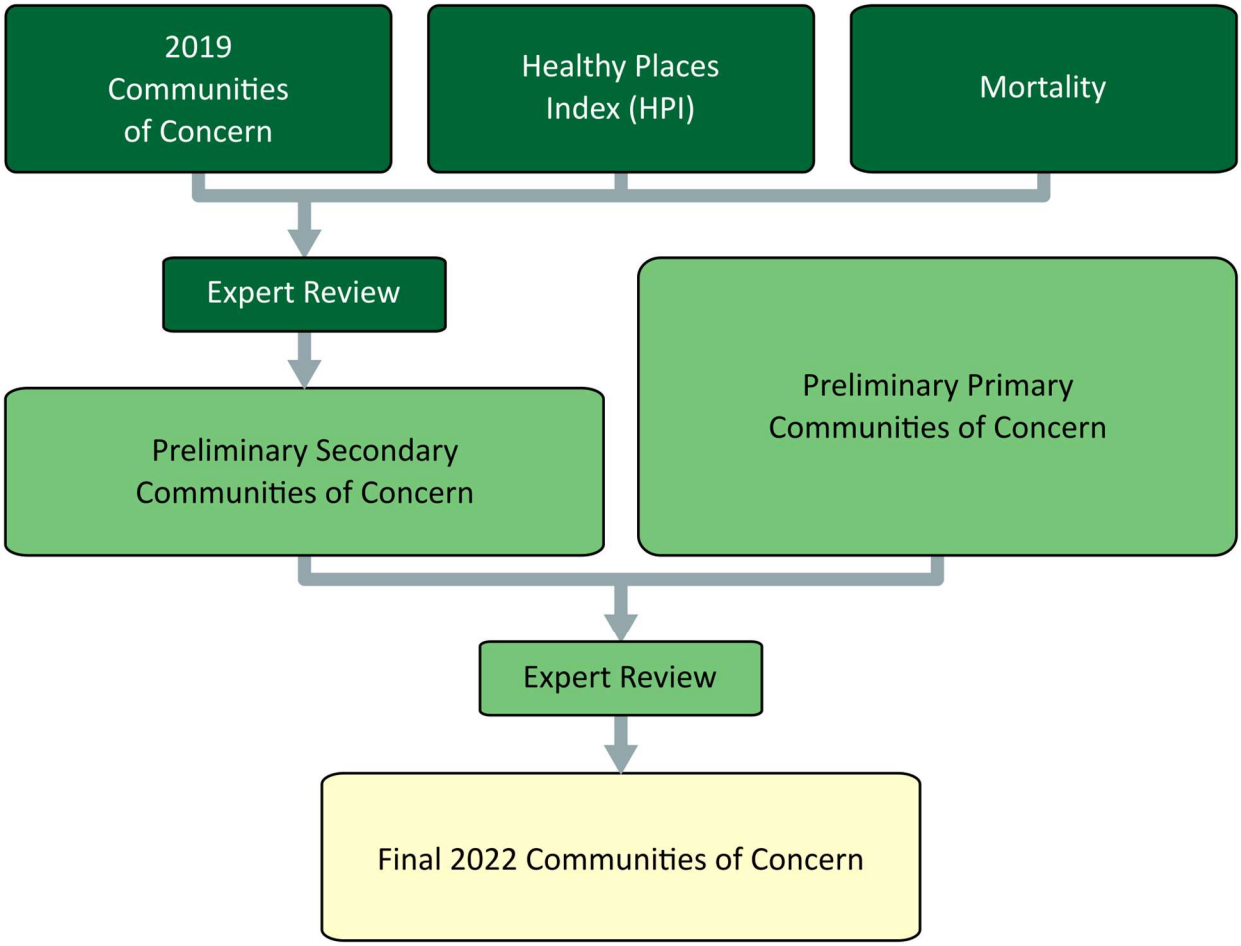

Figure 8: Community of Concern identification process.

As illustrated in Figure 8, 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 (if available); the census tract-level California Healthy Places Index (HPI); and the CDPH ZCTA-level mortality data. Communities of Concern were not identified in the previous CHNA in 2019 for SSRRH.

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 (by public health professors on our research team) 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 (by public health professors on our research team) 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 SHNs were identified are shown in Figure 9 and described here in greater detail. The first step in this process was to identify a set of PHNs from which SHNs 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 22.

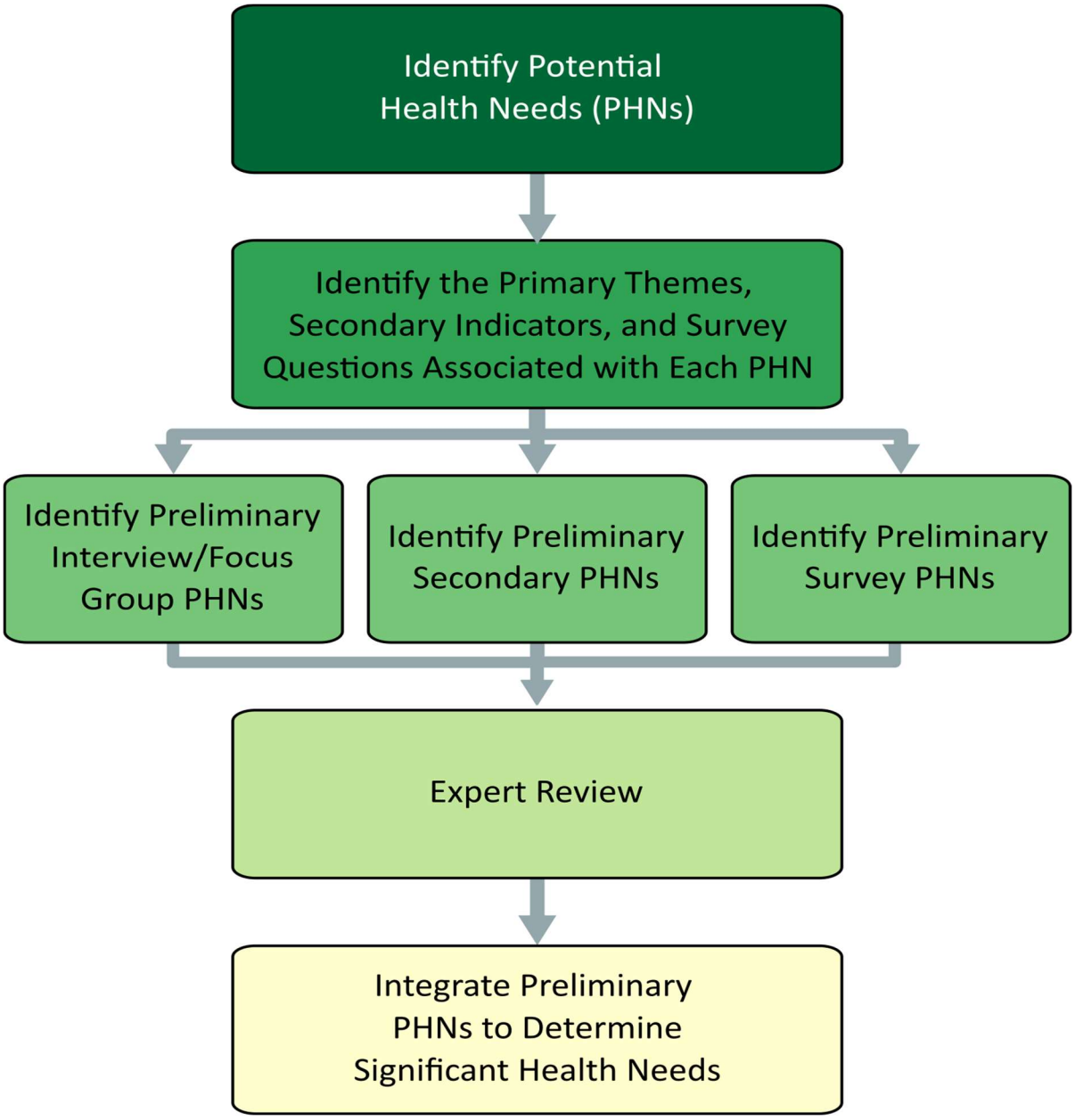

Figure 9: Significant health need identification process.

Table 22: 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
PHN11	Increased Community Connections
PHN12	System Navigation

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 23 through 4. This identification occurs by coding (assigning) data to each health need and setting minimal thresholds for each health need described further below. Tables 23 – 34 provide the coding mechanism used for both primary theme associations and secondary indicators to each specific PHNs.

Access to Mental/Behavioral Health and Substance Use Services

Table 23: 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). The cost for mental/behavioral health treatment is too high. Treatment options in the area for those with Medi-Cal are limited. Awareness of mental health issues among community members is low. Additional services specifically for youth are needed (e.g., child psychologists, counselors, and therapists in the schools). The stigma around seeking mental health treatment keeps people out of care. Additional services for those who are homeless and dealing with mental/behavioral health issues are needed.	Life Expectancy Premature Age-Adjusted Mortality Premature Death Liver Disease Mortality Suicide Mortality Poor Mental Health Days Frequent Mental Distress Poor Physical Health Days Frequent Physical Distress Poor or Fair Health Excessive Drinking Drug Induced Death

Primary Themes	Secondary Indicators
The area lacks the infrastructure to support acute mental health crises. Mental/behavioral health services are available in the area, but people do not know about them. It's difficult for people to navigate for mental/behavioral healthcare. Substance use is a problem in the area (e.g., use of opiates and methamphetamine, prescription misuse). There are too few substance use treatment services in the area (e.g., detox centers, rehabilitation centers). Substance use treatment options for those with Medi-Cal are limited. There aren't enough services here for those who are homeless and dealing with substance use issues. The use of nicotine delivery products such as e-cigarettes and tobacco is a problem in the community. Substance use is an issue among youth in particular. There are substance use treatment services available here, but people do not know about them.	Adult Smoking Primary Care Shortage Area Mental Health Care Shortage Area Medically Underserved Area 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 24: Primary themes and secondary indicators associated with PHN2.

Primary Themes	Secondary Indicators
Insurance is unaffordable. Wait-times for appointments are excessively long. Out-of-pocket costs are too high. There aren't enough primary care service providers in the area. Patients have difficulty obtaining appointments outside of regular business hours. Too few providers in the area accept Medi-Cal. It is difficult to recruit and retain primary care providers in the region. Specific services are unavailable here (e.g., 24-hour pharmacies, urgent care, telemedicine). The quality of care is low (e.g., appointments are rushed, providers lack cultural competence).	Infant Mortality Child Mortality Life Expectancy Premature Age-Adjusted Mortality Premature Death Stroke Mortality Chronic Lower Respiratory Disease Mortality Diabetes Mortality Heart Disease Mortality Hypertension Mortality Cancer Mortality Liver Disease Mortality Kidney Disease Mortality

Primary Themes	Secondary Indicators
Patients seeking primary care overwhelm local emergency departments. Primary care services are available but are difficult for many people to navigate.	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 Income Inequality Homelessness Rate

Active Living and Healthy Eating

Table 25: 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. Fresh, unprocessed foods are unaffordable. Food insecurity is an issue here.	Life Expectancy Premature Age-Adjusted Mortality Premature Death

Primary Themes	Secondary Indicators
Students need healthier food options in schools. The built environment doesn't support physical activity (e.g., neighborhoods aren't walk-able, roads aren't bike-friendly, or parks are inaccessible). The community needs nutrition education programs. Homelessness in parks or other public spaces deters their use. Recreational opportunities in the area are unaffordable (e.g., gym memberships, recreational activity programming. There aren't enough recreational opportunities in the area (e.g., organized activities, youth sports leagues) The food available in local homeless shelters and food banks is not nutritious. Grocery store option in the area are limited.	Stroke Mortality Diabetes Mortality Heart Disease Mortality Hypertension Mortality Cancer Mortality Kidney Disease Mortality Diabetes Prevalence 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 Alone Access to Public Transit

Safe and Violence-Free Environment

Table 26: Primary themes and secondary indicators associated with PHN4.

Primary Themes	Secondary Indicators
People feel unsafe because of crime. There are not enough resources to address domestic violence and sexual assault. Isolated or poorly-lit streets make pedestrian travel unsafe. Public parks seem unsafe because of illegal activity taking place. Youth need more safe places to go after school. Specific groups in this community are targeted because of characteristics like race/ethnicity or age. There isn't adequate police protection police protection. Gang activity is an issue in the area. Human trafficking is an issue in the area. The current political environment makes some concerned for their safety.	Life Expectancy Premature Death Hypertension Mortality Poor Mental Health Days Frequent Mental Distress Frequent Physical Distress Poor or Fair Health Physical Inactivity Access to Exercise Opportunities 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 27: Primary themes and secondary indicators associated with PHN5.

Primary Themes	Secondary Indicators
There aren't enough providers in the area who accept Denti-Cal. The lack of access to dental care here leads to overuse of emergency departments.	Frequent Mental Distress Poor Physical Health Days Frequent Physical Distress Poor or Fair Health

Quality dental services for kids are lacking. It's hard to get an appointment for dental care. People in the area have to travel to receive dental care. Dental care here is unaffordable, even if you have insurance.	Dental Care Shortage Area Dentists Residential Segregation (Non-White/White) Income Inequality Homelessness Rate

Healthy Physical Environment

Table 28: Primary themes and secondary indicators associated with PHN6.

Primary Themes	Secondary Indicators
The air quality contributes to high rates of asthma. Poor water quality is a concern in the area. Agricultural activity harms the air quality. Low-income housing is substandard. Residents' use of tobacco and e-cigarettes harms the air quality. Industrial activity in the area harms the air quality. Heavy traffic in the area harms the air quality. Wildfires in the region harm the air quality.	Infant Mortality Life Expectancy Premature Age-Adjusted Mortality Premature Death Chronic Lower Respiratory Disease Mortality Hypertension Mortality Cancer Mortality 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 29: Primary themes and secondary indicators associated with PHN7.

Primary Themes	Secondary Indicators
Lack of affordable housing is a significant issue in the area. The area needs additional low-income housing options. Poverty in the county is high. Many people in the area do not make a living wage. Employment opportunities in the area are limited. Services for homeless residents in the area are insufficient. Services are inaccessible for Spanish-speaking and immigrant residents. Many residents struggle with food insecurity. It is difficult to find affordable childcare. Educational attainment in the area is low.	Infant Mortality Child Mortality Life Expectancy Premature Age-Adjusted Mortality Premature Death Hypertension Mortality COVID-19 Mortality COVID-19 Case Fatality Diabetes Prevalence 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)

Primary Themes	Secondary Indicators
	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 30: Primary themes and secondary indicators associated with PHN8.

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

Access to Specialty and Extended Care

Table 31: Primary themes and secondary indicators associated with PHN9.

Primary Themes	Secondary Indicators
Wait-times for specialist appointments are excessively long. It is difficult to recruit and retain specialists in the area. Not all specialty care is covered by insurance. Out-of-pocket costs for specialty and extended care are too high. People have to travel to reach specialists. Too few specialty and extended care providers accept Medi-Cal. The area needs more extended care options for the aging population (e.g., skilled nursing homes, in-home care) There isn't enough OB/GYN care available. Additional hospice and palliative care options are needed. The area lacks a kind of specialist or extended care option not listed here.	Infant Mortality Life Expectancy Premature Age-Adjusted Mortality Premature Death Stroke Mortality Chronic Lower Respiratory Disease Mortality Diabetes Mortality Heart Disease Mortality Hypertension Mortality 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 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 32: Primary themes and secondary indicators associated with PHN10.

Primary Themes	Secondary Indicators
There isn't really a focus on prevention around here. Preventive health services for women are needed (e.g., breast and cervical cancer screening). There should be a greater focus on chronic disease prevention (e.g., diabetes, heart disease). Vaccination rates are lower than they need to be. Health education in the schools needs to be improved. Additional HIV and STI prevention efforts are needed. The community needs nutrition education opportunities. Schools should offer better sexual health education. Prevention efforts need to be focused on specific populations in the community (e.g., youth, Spanish-speaking residents, the elderly, LGBTQ individuals, immigrants). Patients need to be better connected to service providers (e.g., case management, patient navigation, or centralized service provision).	Infant Mortality Child Mortality Stroke Mortality Chronic Lower Respiratory Disease Mortality Diabetes Mortality Heart Disease Mortality Hypertension Mortality Liver Disease Mortality Kidney Disease Mortality 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 Asthma ED Rates for Children Excessive Drinking Drug Induced Death

Primary Themes	Secondary Indicators
	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 33: 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. Building community connections doesn't seem like a focus in the area. Relations between law enforcement and the community need improvement. The community needs to invest more in the local public schools. There isn't enough funding for social services in the county. People in the community face discrimination from local service providers. City and county leaders need to work together.	Infant Mortality Child Mortality Life Expectancy Premature Age-Adjusted Mortality Premature Death Stroke Mortality 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

Primary Themes	Secondary Indicators
	Frequent Physical Distress Poor or Fair Health Excessive Drinking 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 34: 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 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 35 lists each secondary indicator and describes the comparison made to the benchmark to determine if it was problematic.

Table 35: 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

Indicator	Benchmark Comparison Indicating Poor Performance
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
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

Indicator	Benchmark Comparison Indicating Poor Performance
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
Severe Housing Problems	Higher
Severe Housing Cost Burden	Higher
Homeownership	Lower

Indicator	Benchmark Comparison Indicating Poor Performance
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 SHNs. 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 survey 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 (by public health professors on our research team) 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 SHN if 40% of the associated quantitative indicators were identified as performing poorly; as a preliminary qualitative SHN if it was identified by 40% or more of the primary sources as performing poorly; and as a preliminary community survey provider survey SHN if it was identified by at least 40% of survey respondents. Finally, a PHN was selected as a SHN if it was included as a preliminary SHN in two of three of these categories.

Health Need Prioritization

The last step in the analysis was to prioritize the identified SHNs. To reflect the voice of the community, SHN prioritization was based solely on primary data. Key informants and focus-group participants were asked to identify the three most SHNs in their communities. These responses were associated with one or more of the PHNs. This, along with the responses across the rest of the interviews and focus groups, was used to derive two measures for each SHN.

First, the total percentage of all primary data sources that mentioned themes associated with a SHN at any point was calculated. This number was taken to represent how broadly a given SHN was recognized within the community. Next, the percentage of times a theme associated with a significant health was mentioned as one of the top three health needs in the community was calculated. Since primary data sources were asked to prioritize health needs in this question, this number was taken to represent the intensity of the need. 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 36: Resources available to meet health needs.

Organization Information			Significant Health Needs							Other Health Needs				
Name	**Primary ZIP Code**	**Website**	Access to Basic Needs Such as Housing, Jobs, and Food	Access to Mental/Behavioral Health and Substance Use Services	Access to Quality Primary Care Health Services	Increased Community Connections	Injury and Disease Prevention and Management	Access to Specialty and Extended Care	Access to Dental Care and Preventive Services	Active Living and Healthy Eating	Safe and Violence-Free Environment	Healthy Physical Environment	Access to Functional Needs	System Navigation
Alzheimer's Association, Inc.	95405	www.alz.org/norcal				x	x							
American Red Cross Northern California Coastal Region	95403	www.redcross.org/local/california/northern-california-coastal/about-us/locations/north-bay.html	x		x	x								
American Cancer Society	95403	www.cancer.org/about-us/local/california.html					x	x						
Becoming Independent	95407	becomingindependent.org/about-us	x			x		x			x		x	
Boys & Girls Clubs of Sonoma-Marin	95401	www.bgcsonoma-marin.org	x			x					x			
Burbank Housing	95407	www.burbankhousing.org/our-story	x			x								
Canine Companions for Independence	95407	canine.org/location/northwest				x								
Career Technical Education Foundation Sonoma County	95407	ctesonomacounty.org	x			x								
Catholic Charities of the Diocese of Santa Rosa	95403	www.srcharities.org	x			x				x				

Organization Information			Significant Health Needs							Other Health Needs				
Center for Volunteer and Nonprofit Leadership	95401	cvnl.org				x								
Center for Well-Being	95404	www.norcalwellbeing.org				x		x		x				
Children's Museum of Sonoma County	95403	www.cmosc.org				x								
Chops Teen Club	95401	www.chopsteenclub.org				x					x			
Child Parent Institute, formerly California Parenting Institute	County Wide	calparents.org		x		x		x						
Cloverdale Unified School District	95425	cloverdale-ca.schoolloop.com	x			x								
Community Action Partnership of Sonoma County	County Wide	www.capsonoma.org	x			x			x	x				x
Community Child Care Council (4C's) of Sonoma County	County Wide	www.sonoma4cs.org				x				x	x			
Community Foundation Sonoma County	County Wide	www.sonomacf.org				x								
Community Matters	95407	community-matters.org				x					x			
Community Support Network	County Wide	www.communitysupportnet.org	x	x										x
Corazón Healdsburg	94558	www.corazonhealdsburg.org				x								
COTS	94953	cots.org	x		x									x

Organization Information			Significant Health Needs							Other Health Needs				
Council on Aging	County Wide	www.councilonaging.com	x			x		x					x	
County of Sonoma Behavioral Health Division	County Wide	sonomacounty.ca.gov/health-and-human-services/health-services/divisions/behavioral-health		x		x		x						
County of Sonoma-Local Federally Qualified Health Centers (FQHC)	County Wide	sonomacounty.ca.gov/health-and-human-services/health-services/divisions/public-health/disease-control/immunizations/community-clinics		x	x									x
Elsie Allen High School Foundation	95402	eahsfoundation.org	x											
Face to Face, Sonoma County AIDS Network	95404	f2f.org	x			x	x	x						
First 5 Sonoma County	County Wide	first5sonomacounty.org		x	x	x								
Food For Thought	95436	www.fftfoodbank.org	x							x				
Hanna Institute	95476	www.hannainstitute.org	x											
Individuals Now dba Social Advocates for Youth (SAY)	95401, 95405	www.saysc.org	x			x					x			
Jewish Community Free Clinic	95404	www.jewishfreeclinic.org		x	x	x	x	x						
John Jordan Foundation	95401	www.johnjordanfoundation.org				x								
La Familia Sana	95425	www.lafamiliasana.org		x	x	x								
La Luz Center	95476	www.laluzcenter.org				x								

Organization Information			Significant Health Needs							Other Health Needs				
Latino Health Forum	County Wide	latinohealthforum.org				x								
LifeWorks of Sonoma County	County Wide	www.lifeworkssc.org		x				x						x
Los Cien Sonoma County INC	County Wide	www.loscien.org				x								
Luther Burbank Memorial Foundation	95403	lutherburbankcenter.org				x								
NAMI Sonoma County	County Wide	namisonomacounty.org		x		x								x
North Bay Leadership Council	94954	northbayleadership.org				x								
Northern California Center for Well-Being	95404	www.norcalwellbeing.org				x	x			x				
Pediatric Dental Initiative of the North Coast	95492	www.pdisurgerycenter.org							x					
Pep Housing	95409	www.pephousing.org				x							x	
Petaluma Health Care District	94954	www.phcd.org	x			x				x				
Petaluma Health Center	94954	phealthcenter.org		x	x			x	x					x
Petaluma Valley Hospital	94954	www.providence.org/locations/norcal/petaluma-valley-hospital			x			x			x			x
Reach for Home	95448	www.reachforhome.org	x		x	x							x	x
Redwood Community Health Coalition	94999	www.rchc.net			x									

Organization Information			Significant Health Needs							Other Health Needs				
Redwood Empire Food Bank	County Wide	refb.org	x											
River to Coast Children's Services	95403	rccservices.org	x			x				x				x
Santa Rosa City Schools	95401	www.srcschools.org	x								x			x
Santa Rosa Community Health	95403	srhealth.org		x	x			x	x					x
Santa Rosa Junior College District	95401, 94954, 95492, 95407, 95436	www.santarosa.edu				x					x			
Sonoma County Bicycle Coalition	County Wide	www.bikesonoma.org				x				x				
Sonoma County Community Development Commission	County Wide	sonomacounty.ca.gov/development-services/community-development-commission				x								
Sonoma County Department of Health Services	County Wide	sonomacounty.ca.gov/health-and-human-services/health-services		x	x	x			x		x			
Sonoma County Economic Development Board Foundation	95401	sonomaedb.org				x								
Sonoma County Family Justice Center	95403	www.fjcsc.org				x								x
Sonoma County Family YMCA	95404	www.scfymca.org				x					x	x		

Organization Information			Significant Health Needs							Other Health Needs				
Sonoma County Family, Youth, and Children's Services	County Wide	sonomacounty.ca.gov/health-and-human-services/human-services/divisions-and-services/family-youth-and-children				x				x	x			x
Sonoma County Health Action	95405	https://sonomahealthaction.org/who-we-are/local-chapters				x								
Sonoma County Office of Education	County Wide	www.scoe.org	x			x					x			
Sonoma County Pride	County Wide	www.sonomacountypride.org				x					x			
Sonoma County Regional Parks	County Wide	parks.sonomacounty.ca.gov				x				x		x		
Sonoma State University	94928	www.sonoma.edu	x											
Sutter Santa Rosa Regional Hospital	95403	www.sutterhealth.org/find-location/facility/sutter-santa-rosa-regional-hospital			x		x	x			x			x
The Ceres Community Project	94949, 95405, 95472	www.ceresproject.org	x			x				x				
The Hanna Center	County Wide	www.hannacenter.org		x		x								
The Living Room Center, Inc.	County Wide	thelivingroomsc.org	x	x	x	x					x			
TLC Child & Family Services	County Wide	tlc4kids.org				x								
United Way Wine Country	County Wide	www.unitedwaywinecountry.org				x								
Verity	95403	www.ourverity.org				x	x							

Organization Information			Significant Health Needs							Other Health Needs				
Voices Youth Center	95401	www.voicesyouthcenter.org/voices-sonoma				x	x			x				
West County Community Services	95446	www.westcountyservices.org	x	x		x								
West County Health Center	95446	www.wchealth.org		x	x	x	x		x					
Women's Recovery Services - A Unique Place	95402	www.womensrecoveryservices.org		x			x							
YWCA of Sonoma County	95403	www.ywcasc.org	x			x					x			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. For this reason, sharing data with other CHNA work in Sonoma County was crucial. Though an effort was made to verify all resources (assets) through a web search, 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: Evaluation of the Impact of Actions Taken Since 2019 CHNA – Sutter Santa Rosa Regional Hospital

This section is based on the 2019–2021 Implementation Strategy that described how Sutter Santa Rosa Regional Hospital (SSRRH) planned to address significant health needs identified in its 2019 Community Health Needs Assessment (CHNA). The 2019 CHNA identified nine community health needs. Working within its mission and capabilities, Sutter Santa Rosa Regional Hospital selected the following needs to address in its Implementation Strategy:

1. Housing and Homelessness
2. Education
3. Economic Security
4. Access to Care
5. Cardiovascular Disease, Stroke, and Tobacco Use

The Implementation Strategy provided details of actions the hospital intended to take, including programs and resources it planned to commit. The tables on the following pages highlight the 2019, 2020, and 2021 impacts achieved by the programs that Sutter Santa Rosa Regional Hospital featured in its 2019–2021 Implementation Strategy.

HOUSING AND HOMELESSNESS

Name of Program, Activity, or Initiative	**Catholic Charities – Nightingale Project**
Description	The Project Nightingale – Respite Care Expansion Pilot Program provides post-acute medical care for homeless persons who are too ill or frail to recover from a physical illness or injury on the streets but are not ill enough to be in a hospital or skilled-nursing facility (SNF). This recuperative care model is short-term residential care that allows homeless individuals the opportunity to rest in a safe environment while accessing medical care and other supportive services. This project is a significant collaboration between Catholic Charities, Sutter Health, Kaiser Permanente, Providence St Joseph Health, and the Sonoma County Department of Health Services. Each partner commits annual grant funding to operate the program and provides consultation around the referral process, home-health services and services needed to reduce the occurrence of re-admission and/or unnecessary emergency department visits.
Goals	The goals of the Nightingale Project are: • Provide a safe discharge plan for hospitalized homeless patients with appropriate after care • Reduce unnecessary/inappropriate use of valuable hospital resources to ensure that hospital beds are available for people who require that level of care
Anticipated Outcomes	• Clients will be linked to a primary care home and enrolled in available enabling services to ensure that basic needs are met (especially around housing). • Improved (and measured) short- and long-term health outcomes for clients as defined by number of clients served and connected to a PCP
2019–2021 Impact	554 Persons Served

Name of Program, Activity, or Initiative	**Grants and Sponsorships addressing Housing & Homelessness**
Description	• Grants and sponsorships are decided annually based on community need. Selected executed grants and sponsorships will be reported at year end. • Continuing Care Groups support former patients newly in recovery and their families in their transition from life in addiction to life in recovery.
Goals	Support access to housing resources and services for individuals and families that are experiencing homelessness; support for services and programs that prevent homelessness.
Anticipated Outcomes	• Increase access to urgent housing needs such as emergency shelters, winter shelters and shelters that accept families or focus on at-risk youth • Increase access to housing resources, such as vouchers, rental assistance and subsidized housing for low-income families and individuals • Increase support to families in need of resources, such as employment training, parent education classes and childcare • Increase support to families that are transitioning in and/or out of homelessness including, counseling and substance abuse treatment services
2019–2021 Impact	313 persons Served

EDUCATION

Name of Program, Activity, or Initiative	**Family Medicine Residency Program**
Description	During their three years of training, the residents (under the supervision of Sutter attending physicians) provide all of the primary care to the patients at Santa Rosa Community Health (SRCH), the largest FQHC in our community.
Goals	Residents will gain world class training and graduate with the highest standard of educating and training to prepare them to practice as family physicians
Anticipated Outcomes	Resident physicians will gain hands-on experience in a variety of specialties by receiving training from SSRRH attending physicians
2019–2021 Impact	109 persons served

Name of Program, Activity, or Initiative	**Grants and Sponsorships addressing Education**
Description	Grants and sponsorships are decided annually based on community need. Selected executed grants and sponsorships will be reported at year end.
Goals	• Promote access to education programs and resources for children at various ages and grade levels • Promote access to integrated support services on school campuses including education around healthy eating habits, personal safety and mental health and well-being • Increase access to college-readiness resources for high school students including scholarships, job-based learning opportunities and pre-college programs
Anticipated Outcomes	• Increase number of college resources for high school graduates • Increase healthy eating habits for elementary school students
2019–2021 Impact	1,129 persons served

ECONOMIC SECURITY IMPACT

Name of Program, Activity, or Initiative	**Workforce Training of students from local college programs**
Description	In an effort to partner with local educational institutions and further learning opportunities for students SSRRH precepts and/or train students in a variety of health care programs. One of our partnerships with a local community college and universities, provides student nurses to train and precept with a senior level staff nurse. Other students from educational programs include respiratory therapy, physical therapy, and physician assistant fellows. In total various supervising staff are training over 300 students a year aside from attending physicians that are training and supervising the resident physicians.
Goals	Continue to build relationships with local educational programs for students studying careers in health care.
Anticipated Outcomes	Effectively train and educate the future workforce, by providing the highest level of education and competent staff.
2019–2021 Impact	630 persons served

ACCESS TO CARE

Name of Program, Activity, or Initiative	**Family Medicine Residency Program**
Description	The Santa Rosa Family Medicine Residency Program has been the sole local contributor to the primary care provider pipeline in Sonoma County for more than 45 years. In affiliation with the UCSF School of Medicine, this training program for family physicians is one of the most renowned training program for family doctors in the United States. Graduates of the program represent about 50% of the current practicing family doctors in Sonoma County and about 2/3 of the medical staff at our local FQHC's are graduates. FQHC's care for about 25% our county's population. During their three years of training, the residents (under the supervision of Sutter attending physicians) provide all of the primary care to the patients at the largest FQHC in our community. This represents about 25,000 patient visits, provided at no charge to the clinic. Sutter covers all the costs related to this program that are not covered through Medicare IME reimbursement.
Goals	In addition to providing high quality training to family medicine residents, the program provides greater access to care by addressing the shortage of primary care providers. Having a highly-skilled primary care workforce also can reduce health care costs.
Anticipated Outcomes	Increase number of well-trained physicians and the availability of these services in the future.
2019–2021 Impact	6,596 persons served by residency program

Name of Program, Activity, or Initiative	**Advanced Illness Management (AIM)**
Description	Sutter Health's Advanced Illness Management (AIM) program provides customized support for patients with advanced chronic illnesses in order to manage their health/illness symptoms, manage their medications, coordinate their care, plan for the future, and live the kind of life they want. Once the AIM team understands the patient's health issues, lifestyle, and personal preferences, they work with the patient to tailor a care plan, ease the transition from hospital to home, and provide continuing over-the-phone support and in-person visits in the home or at the doctor's office as needed. If the patient returns to the hospital, AIM staff continues to support the patient there. The AIM team also provides support for the patient's family and helps them understand anything about the patient's condition that the patient wants them to know.
Goals	Help chronically ill patients better manage their health/illness through skilled respectful coaching and care tailored to their needs.
Anticipated Outcomes	Increase coaching services and support for patients who need help in self-managing advanced chronic illness.
2019–2021 Impact	452 persons served

Name of Program, Activity, or Initiative	**Operation Access**
Description	Since 2001, Operation Access has enabled physicians and medical centers in Sonoma County to donate vital surgical and specialty care to people in need. Sutter Health has partnered with OA to provide free time in the operating room, staffing and surgical supplies to facilitate surgeries for people without insurance or for whom public health coverage will not authorize an elective, but important restorative or corrective surgical procedure. Surgeries provided through OA often restore functionality so as to allow a previously disabled patients to return to work. OA is also able to facilitate surgical intervention of conditions before they become emergent which increases morbidity, mortality, and cost to the healthcare system. SSRRH will provide free OR time (which includes staffing and supplies) each year.
Goals	Provide every person not eligible for services through traditional insurance pathways to access needed surgical services, regardless of their ability to pay.
Anticipated Outcomes	• Increase in the number of high volume specialty volunteer providers • Improved patient outcomes through timely surgical procedures • Provision of free surgical and specialty services to all eligible uninsured people
2019–2021 Impact	204 persons served

CARDIOVASCULAR DISEASE, STROKE, AND TOBACCO USE

Name of Program, Activity, or Initiative	**Northern California Center for Well-Being (NCCWB)**
Description	The Northern California Center for Well-Being (NCCWB) is a not-for-profit community –based organization with a mission to improve the health of the community through prevention-oriented education and intervention to address obesity, diabetes, and heart disease. They offer a myriad of classes and health education materials that are free or sliding-scale fee- based for low-income families. The specific program that SSRRH supports is the Heart Works program. Heart Works focuses on cardiac rehabilitation for patients that are suffering from cardiac disease. Heart Works also is a preventative intervention for individuals with cardiac disease. With a fully equipped fitness center and licensed medical staff, patients successfully recover in a tiered program beginning with Phase II, fully supervised, to Phase III, supervised in a group setting. NCCWB serves everyone, but also some of the most at risk in the community. If it were not for the organization structure that accepted multiple types of insurance and sliding scale fees, resources for cardiac rehabilitation would not exist.
Goals	Patients accessing the Heart Works will reduce their risk of another cardiac episode and/or reduce severity of existing cardiac disease.
Anticipated Outcomes	Whether recovery or prevention, Heart Works patients will improve health outcomes by obtaining necessary tools to successfully manage heart disease.
2019–2021 Impact	545 persons served

MENTAL HEALTH & SUBSTANCE ABUSE

Name of Program, Activity, or Initiative	**Grants and Sponsorships addressing Mental Health**
Description	Grants and sponsorships are decided annually based on community need. Selected executed grants and sponsorships will be reported at year end.
Goals	Promote mental health and the healthy development of children and families in both the broader community and at-risk communities; prevent adverse childhood experiences
Anticipated Outcomes	• Increase access to acute mental health and psychiatric services • Increase support to families in need of resources, such as parent education classes, housing, childcare, and shelters. • Increase intensive assessment, counseling, and referral services to help families and individuals avert homelessness. • Increase mental health services to homeless and at-risk youth. • Increase linguistically and culturally appropriate support groups and counseling. • Increase early childhood education for at-risk families. • Increase integration of behavioral health services into existing primary care settings for at-risk Sonoma County residents.
2019–2021 Impact	7,046 persons served