Sutter Health

SUTTER COAST HOSPITAL

2019 Community Health Needs Assessment

Mission

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

Vision

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

Community Health Needs Assessment

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

2019 Community Health Needs Assessment

Conducted on behalf of

Sutter Coast Hospital
800 East Washington Boulevard
Crescent City, CA 95531

Conducted by

January 2019

Acknowledgements

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

Community Health Insights (www.communityhealthinsights.com) conducted the assessment on behalf of Sutter Coast Hospital. Community Health Insights is a Sacramento-based research-oriented consulting firm dedicated to improving the health and well-being of communities across Northern California. This joint report was authored by:

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Table of Contents

List of Tables

List of Figures

Executive Summary

Purpose

The purpose of this community health needs assessment (CHNA) was to identify and prioritize significant health needs in Sutter Coast Hospital's service area. The priorities identified in this report help to guide this nonprofit hospital's community health improvement programs and community benefit activities, as well as its collaborative efforts with other organizations that share a mission to improve health. This CHNA report meets requirements of the Patient Protection and Affordable Care Act (and, in California, Senate Bill 697) that nonprofit hospitals conduct a community health needs assessment at least once every three years. The CHNA was conducted by Community Health Insights, a Sacramento-based research-oriented consulting firm dedicated to improving the health and well-being of communities across Northern California. Community Health Insights has conducted multiple CHNAs over the previous decade (www.communityhealthinsights.com).

Community Definition

The definition of the community served included all of Del Norte County and Brookings Harbor, located in Curry County, Oregon.

Assessment Process and Methods

The data used to conduct the CHNA were identified and organized using the widely recognized Robert Wood Johnson Foundation's County Health Rankings model.[1] This model of population health includes many factors that impact and account for individual health and well-being. Further, to guide the overall process of conducting the assessment, a defined set of data-collection and analytic stages were developed. These included the collection and analysis of both primary (qualitative) and secondary (quantitative) data. Qualitative data included interviews with 19 community health experts, social-service providers, and medical personnel in one-on-one and group interviews, as well as four community member focus groups with 37 community residents in Del Norte and Curry Counties.

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

Process and Criteria to Identify and Prioritize Significant Health Needs

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

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

List of Prioritized, Significant Health Needs

The following significant health needs were identified and are listed below in prioritized order. The first two health needs were equally ranked in the prioritization process:

1. Access to quality primary healthcare services
1. Access to mental/behavioral/substance abuse services
2. Access to basic needs such as housing, jobs, and food
3. Access to meeting functional needs (transportation and physical mobility)
4. Injury and disease prevention and management
5. Access to specialty and extended care
6. Access to active living and healthy eating
7. Safe and violence-free environment
8. Access to dental care and preventative services
9. Pollution-free living environment

Resources Potentially Available to meet the Significant Health Needs

In all, 168 resources were identified that were potentially available to meet the identified significant health needs in the hospital's service area. The identification method included starting with the list of resources from the 2016 CHNA, verifying that the resource still existed, and then adding newly identified resources into the 2019 CHNA report.

Conclusion

This CHNA report details the needs of Del Norte County, including a portion of Brookings Harbor, Oregon. It provides both an overall health and social examination of the needs of community members. The work provides a comprehensive profile to guide decision-making for implementation of community-health-improvement efforts.

Introduction and Purpose

Both state and federal law require that nonprofit hospitals conduct a community health needs assessment (CHNA) every three years to identify and prioritize the significant health needs of the communities they serve. The results of the CHNA guide the development of implementation plans aimed at addressing identified health needs. Federal regulations define a *health need* accordingly: "Health needs include requisites for the improvement or maintenance of health status in both the community at large and in particular parts of the community (such as particular neighborhoods or populations experiencing health disparities)" (p. 78963).[2]

This report documents the processes, methods, and findings of a CHNA conducted on behalf of Sutter Coast Hospital (SCH), located at 800 East Washington Blvd., Crescent City, California. SCH serves a coastal community located in Del Norte County, California, and Curry County, Oregon; the community sits on the northwest California/Oregon border. SCH is an affiliate of Sutter Health, a nonprofit healthcare system. The CHNA was conducted over a period of seven months, beginning in June 2018 and concluding January 2019. 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 the SCH. Community Health Insights is a Sacramento-based research-oriented consulting firm dedicated to improving the health and well-being of communities across Northern California. Community Health Insights has conducted multiple CHNAs over the previous decade.

Organization of This Report

This report follows federal guidelines issued on how to document a CHNA. First, the prioritized listing of significant health needs identified through the CHNA is described, along with the process and criteria used in identifying and prioritizing these needs. Next, the methods used to conduct the CHNA are described, including how data were collected and analyzed. Then, the community served by SCH and how the community was identified is described. After that comes a description of how SCH solicited and considered the input received from persons who represented the broad interests of the community served. Resources potentially available to meet these needs are identified and described next. Finally, a summary is included of the impact of actions taken by SCH to address significant health needs identified in its previous CHN.

A detailed methodology section titled "Sutter Coast Hospital 2019 CHNA Technical Section" is included later in this report (see page 27). This section includes an in-depth description of the methods followed in collection, analysis, and results of data to identify and prioritize significant health needs.

[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 significant health needs within the SCH service area. In all, 10 significant health needs were identified. After these were identified they were prioritized based on an analysis of primary data sources that mentioned the health need as a priority health need. The findings are displayed in Figure 1.

In the figure, the blue portion of the bar represents the percentage of primary data sources that referenced the health need. This was combined with the percentage of times any theme associated with a health need was mentioned as one of the top three health needs in the community.

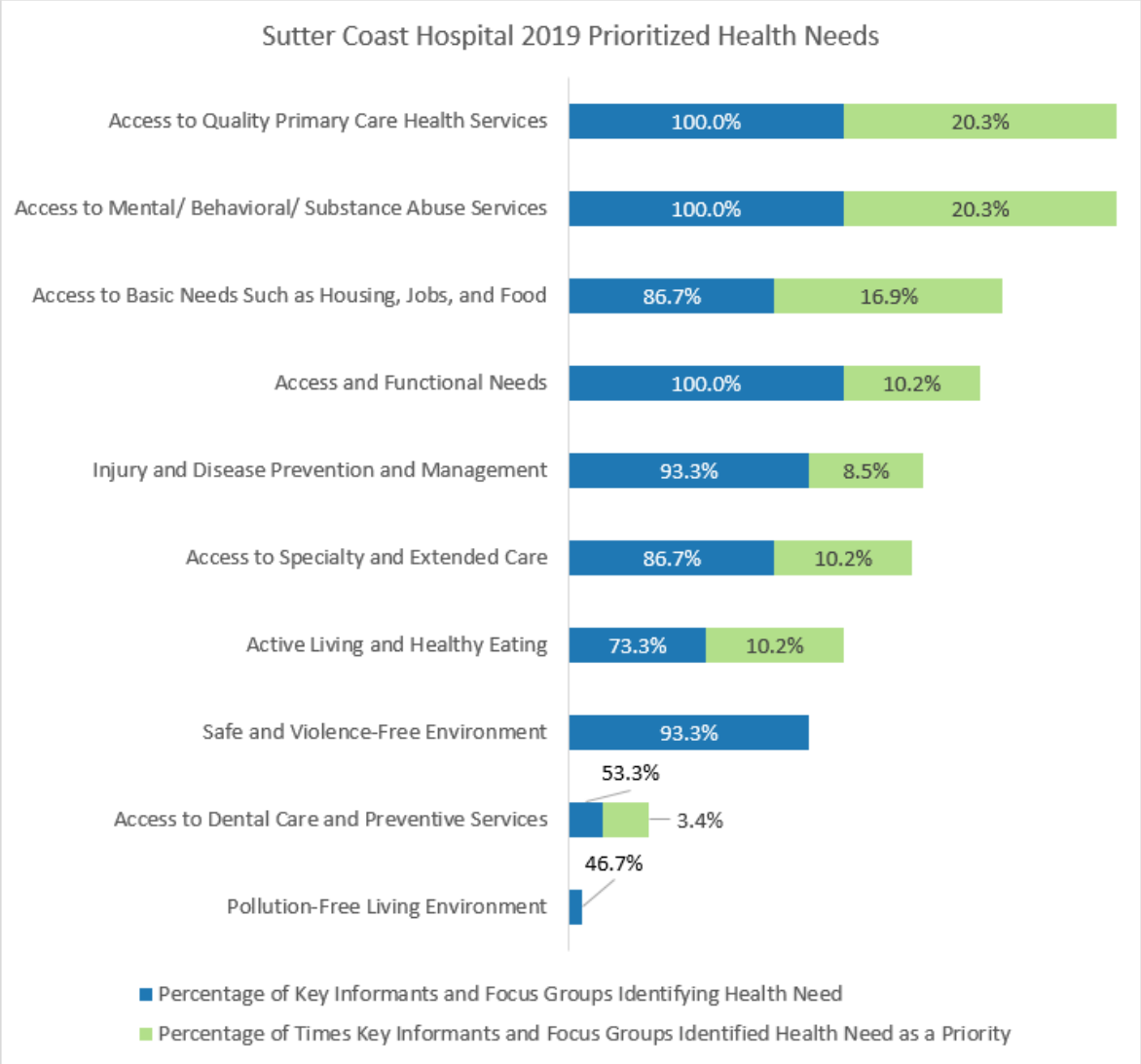

Figure 1: Prioritized, significant health needs for SCH service area

The significant health needs are described below. Those secondary data indicators used in the CHNA that performed poorly compared to benchmarks are listed in the table below each significant health need. Qualitative themes that emerged during analysis are also provided in the table.

1. Access to Quality Primary Care Health Services

Two health needs tied as the highest-priority significant health needs for the SCH service area. The first was access to quality primary care health services. Primary care resources include community clinics, pediatricians, family-practice physicians, internists, nurse practitioners, pharmacists, telephone advice nurses, and similar. Primary care services are typically the first point of contact when an individual seeks healthcare. These services are the front line in the prevention and treatment of common diseases and injuries in a community.

Quantitative Indicators		Qualitative Themes
• Cancer Mortality • CLD Mortality • Diabetes Mortality • Heart Disease Mortality • Influenza and Pneumonia Mortality • Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality	• Cancer: Colon and Rectum • Diabetes Prevalence • Cancer Lung and Bronchus • Health Professional Shortage Areas (HPSA) Primary Care • HPSA Medically Underserved Area • Mammography Screening • Primary Care Physicians	• Existing providers in the county are overburdened • Long wait times to get in for care – even for those with insurance • Physician retention issues, it can feel like a revolving door of providers • People feel like they have to use the ED for primary care because they can't get timely access • Need to recruit and retain more providers • Difficult to access primary care due to very long wait times

1. Access to Mental/Behavioral/Substance Abuse Services

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

Quantitative Indicators	Qualitative Themes
• Liver Disease Mortality • Suicide Mortality • Poor Mental Health Days • Poor Physical Health Days • Drug Overdose Deaths • Excessive Drinking • HPSA Mental Health • Psychiatry Providers	• Need mental health and behavioral health in schools • Mental health/behavioral health support groups needed • More training needed for police who deal with people with mental illness or disorders like autism • A facility needed for people experiencing a mental health crisis • County needs inpatient, outpatient, and prevention programs • Not enough resources for people dealing with substance abuse – more programs and providers needed • Lack of qualified mental health professionals such as clinical therapists, psychiatrists, and credentialed drug abuse counselors • People unable to pass drug tests to secure employment • Methamphetamine a big issue in the community • People addicted to opioids

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

Access to affordable and clean housing, stable employment, quality education, and adequate food for health maintenance are vital for survival. Maslow's Hierarchy of Needs[3] says that only when members of a society have their basic physiological and safety needs met can they then become engaged members of society and self-actualize or live to their fullest potential, including enjoying good health.

Quantitative Indicators	Qualitative Themes
• Premature Age-Adjusted Mortality • Years of Potential Life Lost • HPSA Medically Underserved Area • High School Graduation • Some College • Unemployed • Children with Single Parents • Free and Reduced-Price Lunch • Children in Poverty • Median Household Income • Housing Units No Vehicle • Limited Access to Healthy Food	• Community needs more economic opportunities • Rising housing costs an issue • Not enough affordable rentals • Local community college not offering enough opportunities for locals to build their skills – need to offer more vocational opportunities • Healthcare very expensive • For those who are homeless, lack of hygiene options making life very difficult • The casino in the community making it hard for people with gambling issues to control themselves • Need for employment options that pay a living wage • More homeless shelters needed where people can rest and shower • Medication costs high so people self-medicating with alcohol • High-school graduation rates low and not enough kids going on to college • When businesses close, need the chamber to support opening new businesses • Only one grocery store in town limits options • Even when they have access to healthy food, people unaware of how to prepare it • The community lacking sufficient affordable housing options • Transitional housing needed for homeless population

4. Access and Functional Needs – Transportation and Disability That Prevents Access through Movement

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

Quantitative Indicators	Qualitative Themes
• Housing Units No Vehicle • Percentage with Disability	• Transportation an issue for low-income residents • Need more affordable public transportation • Many people have unreliable cars • Minimal ride-share options • Services in the county not always reliable and don't always come when you need them • Roads hard to pass in winter, making the community even more geographically isolated • Limited bus system and no taxis in the community

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

	• Have to travel a long way for specialty care and hard to get transportation • Public transportation that is available needing to run longer in the day • Weather sometimes a big issue, creating transportation barriers when there is snow or fires

5. Injury and Disease Prevention and Management

Knowledge is important for individual health and well-being, and efforts aimed at prevention are powerful vehicles to improve community health. When community residents lack adequate information on how to prevent, manage, and control their health conditions, those conditions tend to worsen. Prevention efforts focused on reducing cases of injury, infectious disease control (e.g., STI prevention, influenza shots), and intensive strategies around the management of chronic diseases (e.g., diabetes, hypertension, obesity, and heart disease). These are important for community health improvement.

Quantitative Indicators	Qualitative Themes
• CLD Mortality • Diabetes Mortality • Heart Disease Mortality • Influenza and Pneumonia Mortality • Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality • Suicide Mortality • Unintentional Injury Mortality • Diabetes Prevalence • Drug Overdose Deaths • Excessive Drinking • Adult Obesity • Physical Inactivity • Teen Birth Rate • Adult Smokers • Motor Vehicle Crash Deaths	• Need to focus more on prevention *(This issue was consistently mentioned during the key informant interviews and focus groups)* • Kids in school needing to learn about prevention of chronic disease • Community lacking a Gamblers Anonymous group • When diagnosed with chronic disease, people often unaware what is going to happen and what resources they will need • Community lacking sufficient resources to deal with those with chronic disease • Insufficient education about how to access healthcare and services in the community • Need a case-management program in the community • Need more programs for those with substance abuse problems • Prevention and education needed, especially with regard to nutrition

6. Access to Specialty and Extended Care

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

Quantitative Indicators	Qualitative Themes
• Cancer Mortality • CLD Mortality • Diabetes Mortality • Heart Disease Mortality	• Population is aging and must travel to access needed specialty care • Long waits for providers in the community

• Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality • Diabetes Prevalence • Cancer Lung and Bronchus • Psychiatry Providers • Specialty Care Providers	• Even with insurance, insufficient access because of large demand and not enough providers • Lack of care homes for aging populations who need financially subsidized programs • Urology, cardiology, and neurology providers lacking • Need more skilled nursing facilities in town • The population in the community needing an advanced-illness-management program • Prenatal care and pediatrics needed • Need more specialists in the community so community members can receive care close to home

7. Active Living and Healthy Eating

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

Quantitative Indicators	Qualitative Themes
• Cancer Mortality • Diabetes Mortality • Heart Disease Mortality • Kidney Disease Mortality • Stroke Mortality • Cancer Colon and Rectum • Diabetes Prevalence • Limited Access to Healthy Food • Access to Exercise • Physical Inactivity • Adult Obesity	• Grocery store options limited • Healthy food expensive • People lacking education on how to prepare healthy food • Need for more education about nutrition • The community needing an indoor pool so older people can do water exercise • Lack of recreational opportunities for youth • Nutrition issues driving obesity • Use of e-cigarettes on the rise • Indoor recreational activities needed for the community • No supermarket outside of Crescent City and small markets offering limited options for fresh produce

8. Safe and Violence-Free Environment

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

Quantitative Indicators	Qualitative Themes
• Poor Mental Health Days • Homicides • Motor Vehicle Crash Deaths • Violent Crimes	• Though natural resources surround the community, with homelessness on the rise, community members feeling unsafe enjoying those resources • Cars parked by recreational trails getting broken into • Drug abuse leading to prison, poverty, homelessness • More sidewalks needed • Meth use on the rise

9. Access to Dental Care and Prevention

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

Quantitative Indicators	Qualitative Themes
• Dentists • HPSA Dental	• Community needing more dentists • Many traveling out of town for dental care • Dental services for kids needed • Pediatric dental care inconsistent and extractions causing issues with adult teeth • Need more providers that will accept Medi-Cal dental

10. Pollution-Free Living Environment

Living in a pollution-free environment is essential for health. Individual health is determined by a number of factors, and some models show that one's living environment, including the physical (natural and manmade) and sociocultural environment, has more impact on individual health than one's lifestyle, heredity, or access to medical services.[4]

Quantitative Indicators	Qualitative Themes
• Cancer Mortality • CLD Mortality • Cancer: Colon and Rectum • Cancer: Lung and Bronchus • Adult Smokers • Drinking Water Violations	• E-cigarette use on the rise

Populations Experiencing Health Disparities

During the primary data collection, community health experts identified the following populations experiencing health disparities within SCH service area:

- Native American: Yurok in Klamath
- Native American: Tolowa Dee-ni' Nation near Smith River
- Native American: Resighini Rancheria near Klamath
- Homeless
- Migrant workers near Smith River
- Undocumented
- Low income
- Hmong
- Hispanic

The Native American population was mentioned most often by the community health experts. They also stated that because of the current political environment, migrant and undocumented community members were likely not seeking care, thereby adding to disparities in those populations. Health experts stated the Hmong population was a very small one in the county, but specifically pointed to this group as having issues with navigating healthcare and social services.

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

Method 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.[5] This model of population health includes the many factors that impact and account for individual health and well-being. Further, to guide the overall process of conducting the assessment, a defined set of data collection and analytic stages were developed. For a detailed over 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. SCH requested written comments from the public on its 2016 CHNA and most recently adopted implementation strategy through SHCB@sutterhealth.org.

At the time of the development of this CHNA report, SCH had not received written comments. However, input from the broader community was considered and taken into account for the 2019 CHNA through key informant interviews and focus groups. SCH will continue to use its website as a tool to solicit for 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 11 interviews with 19 community health experts as well as 4 focus groups conducted with a total of 37 community residents. (A full listing of all participants can be seen in the technical section of this report.)

Secondary data included four 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 hospital service area (HSA) with greater concentrations of disadvantaged populations and poor health outcomes. A set of county-level indicators was collected from various sources to help identify and prioritize significant health needs. Additionally, socioeconomic indicators were collected to help describe the overall social conditions within the service area. Health outcome indicators included measures of both mortality (length of life) and morbidity (quality of life). Health factor indicators included measures of 1) health behaviors such as diet and exercise and tobacco, alcohol, and drug use; 2) clinical care, including access to quality of 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, 64 different health outcome and factor indicators were collected for the CHNA.

Data Analysis

Primary and secondary data were analyzed to identify and prioritize the significant health needs within the SCH service area. This included identifying 10 potential health needs (PHN) in these communities. These potential health needs were those identified in previously conducted CHNAs. Data were analyzed to discover which if any of the PHNs were present in the hospital's service area. After these were identified, health needs were prioritized based on an analysis of primary data sources that described the PHN as a significant health need.

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

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

Description of Community Served

SCH HSA includes Del Norte County, California, and the Brookings Harbor area of Curry County, Oregon, which are both coastal communities. The HSA was defined by five ZIP Codes noted in Figure 2. This area was identified as the HSA because the majority of SCH's patients resided in these ZIP Codes.

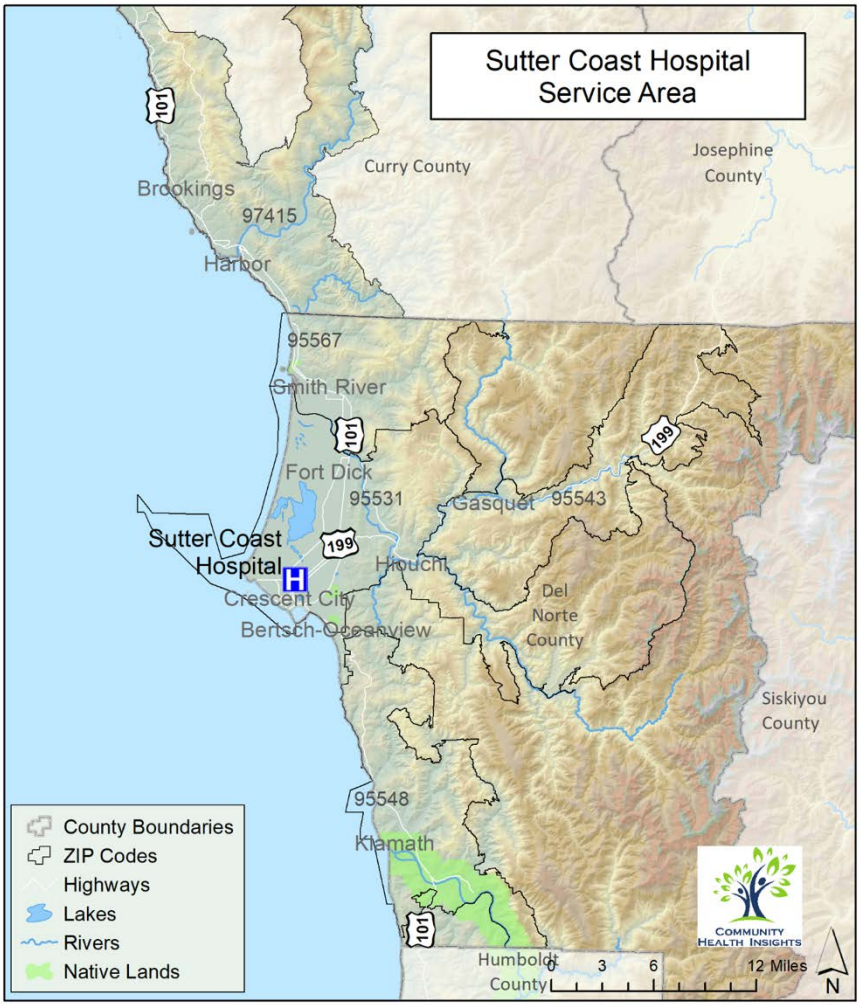

Figure 2: Community served by SCH

Population characteristics for each ZIP Code that is located in the HSA are presented in Table 3. These are compared to the state and county for descriptive purposes. Any ZIP Code with rates that performed poorly when compared to the state or county benchmark is highlighted.

Table 1: Population Characteristics for Each ZIP Code Located in the SCH Service Area

ZIP Code	Total Population	% Minority	Median Age	Median Income	% Poverty	% Unemployed	% Uninsured	% No HS Graduation	% Living in High Housing Costs	% with Disability
95531	23,500	36.5	37.5	$43,841	20.7	10.2	11.1	18.4	37.4	22.0
95543	792	23.0	50.7	$32,500	24.6	0.0	1.4	8.3	39.6	25.0
95548	1,288	39.0	44.4	$31,848	34.5	20.9	14.3	21.9	31.9	33.3
95567	2,048	45.6	38.7	$44,572	23.7	10.3	9.5	12.0	24.9	20.1
Del Norte County	27,628	36.9	38.1	$42,363	21.7	10.4	10.8	17.8	36.3	22.5
California	38,654,206	61.6	36.0	$63,783	15.8	8.7	12.6	17.9	42.9	10.6
97415	13,816	15.1	55.1	$37,672	14.1	11.1	9.8	10.6	41.1	25.3
Curry County	22,364	12.7	55.1	$38,661	15.2	11.0	10.0	10.3	38.2	25.5
Oregon	3,982,267	23.0	39.1	$53,270	15.7	8.1	10.4	10.0	36.1	14.7

(Source: 2012-2016 American Community Survey 5-year estimates; U.S. Census Bureau)

Community Health Vulnerability Index

Figure 5 displays the Community Health Vulnerability Index (CHVI) for the SCH service area. The CHVI is a composite index used to help understand the distribution of health disparities within the service area. Like the Community Needs Index or CNI[6] on which it was based, the CHVI combines multiple sociodemographic indicators (listed below) to help identify those locations experiencing health disparities. Higher CHVI values indicate a greater concentration of groups supported in the literature as being more likely to experience disparities. (Interested readers are referred to the technical section of this report for further details as to the CHVI construction.)

- Percentage Minority (Hispanic or Nonwhite)
- Population 5 Years or Older Who Speak Limited English
- Percentage 25 or Older without a High School Diploma
- Percentage Unemployed
- Percentage Uninsured
- Percentage Families with Children in Poverty
- Percentage Households 65 years or Older in Poverty
- Percentage Single-Female-Headed Households in Poverty
- Percentage Renter-Occupied Housing Units

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

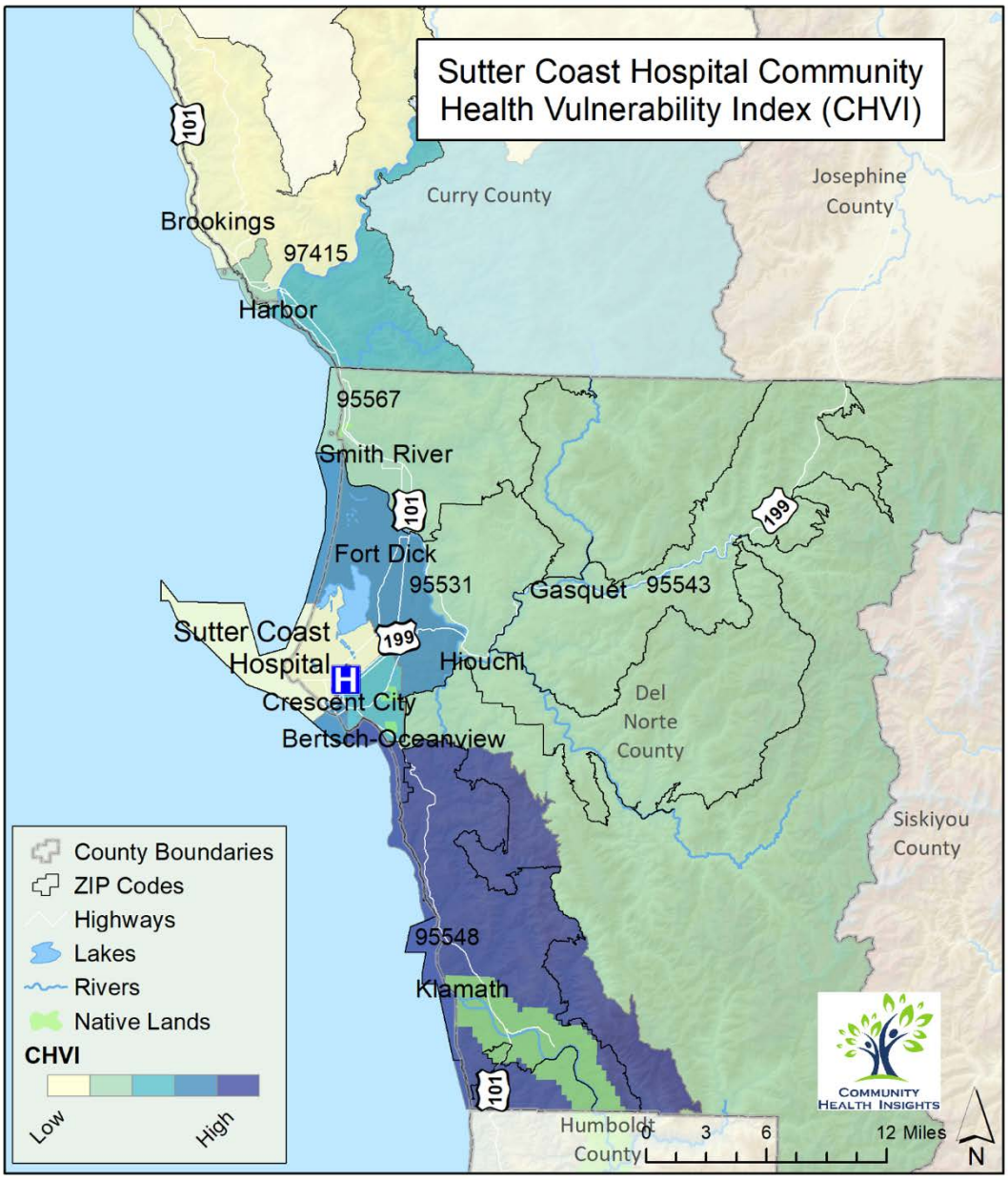

Figure 3: Community Health Vulnerability Index for SCH

The census tracts with the highest overall CHVI scores (greatest vulnerability) include Klamath and areas in and around Bertsch-Oceanview and Crescent City. Additionally, the highest CHVI scores in the Curry County portion of the service area were in and around Harbor. These are areas that likely have a higher concentration of community members experiencing health disparities.

Resources Potentially Available to Meet the SHNs

In all, 168 resources were identified in the SCH service area that were potentially available to meet the identified significant health needs. The identification method included starting with the list of resources from the *2016 Sutter Coast Hospital CHNA*, verifying that the resource still existed, and then adding

newly identified resources into the 2019 CHNA report. Examination of the resources revealed the following numbers of resources for each significant health need as shown in Table 2:

Table 2: Resources Potentially Available to Meet Significant Health Needs in Priority Order

Significant Health Need (in priority order)	Number of resources
Access to quality primary healthcare services	20
Access to mental/behavior/substance abuse services	22
Access to basic needs such as housing, jobs, and food	30
Access and functional needs	9
Injury and disease prevention and management	22
Access to specialty and extended care	18
Active living and healthy eating	15
Safe and violence-free environment	15
Access to dental care and prevention services	15
Pollution-free living environment	2
Total Resources	***168***

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

Impact/Evaluation of Actions Taken by Hospital

Regulations require that each hospital's CHNA report include: "… an evaluation of the impact of any actions that were taken since the hospital facility finished conducting its immediately preceding CHNA to address the significant health needs identified in the hospital facility's prior CHNA(s) (p. 78969)."[7] The following describes the impact of actions taken by SCH.

Access to Mental, Behavioral, and Substance Abuse Services

Name of program/activity/initiative	Access to Psychiatric Services
Description	In collaboration with other community agencies, revitalize the effort to recruit a psychiatrist to the SCH Service Area.
Goals	For the measurement period, actual performance will be better than the baseline data. Data being the population per mental health provider for Del Norte County. Baseline is 1101 Del Norte residents per 1 mental health worker.
Anticipated Outcomes	A collaborative effort among community leaders to successfully recruit a full time psychiatrist to the SCH Service area. With success, some patients will experience local access to psychiatric services resulting in improved mental health outcomes. For physicians and mid-level providers to have a local resource to refer patients to and to have local access to physician colleague to coordinate patient mental health needs. For the community, to have an additional mental health professional to

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

	collaborate with relative to the local mental health delivery system (operations & design).
Plan to Evaluate	Evaluation will occur within two months of public release of population per mental health provider data.
Metrics Used to Evaluate the program/activity/initiative	Ratio of population to 1 mental health worker. Del Norte baseline is 1101 Del Norte residents per 1 mental health worker.
Impact	Through the implementation of tele-psychiatry, access to mental health services has improved. Typically, patients present to two agencies: SCH Emergency Department and the Del Norte County Mental Health Agency. Both agencies utilize different tele-psychiatry providers and networks. Given the care delivery model, the previously designed evaluative metric (ratio of population to 1 mental health worker) is no longer applicable.
Community Benefit Contribution/Expense	According to Stacey Stacy, $78K was budgeted for Tele-Psychiatry Services in the Emergency Department's operating budget. YTD July, no dollars have been assigned to this expense class. According to Tim Jones, Sutter Health's Tele-Psychiatry Program Manager, the tele-psychiatry service has been utilized on four occasions since October 2017. The Sutter charge back is $250 per occurrence.
Program, Initiative, or Activity Refinement	With the successful implementation of tele-psychiatry, the initiative to recruit a psychiatrist to live and work in the SCH Service Area was postponed to better understand the impact tele-psych implementation has and reassess the potential need for a local psychiatrist.

Name of program/activity/initiative	Crisis Stabilization
Description	In the SCH service delivery area, there is a void in the mental health delivery system - absence of a local crisis stabilization facility and service.
Goals	If a crisis stabilization unit is established, ED visits due to mental health issues should be less than baseline at 18 months post opening of a crisis stabilization unit for zip code 95531 (Crescent City). And/or hospitalizations due to mental health issues will be less than baseline at 18 months post opening of a crisis stabilization unit for zip code 95531 (Crescent City).
Anticipated Outcomes	Patients in an acute mental health crisis, will receive appropriate, timely, and coordinated medical care and mental healthcare – better than the current circumstance.
Plan to Evaluate	If implemented, the evaluative period and process will occur at the 18th month or as soon as the annual data is available.
Metrics Used to Evaluate the program/activity/initiative	Decline in ED visits due to mental illness for zip code 95531 (Crescent City) with the baseline being 366.9 visits per 10,000 population. And/or a decline in Hospitalizations due to mental illness for zip code 95531 (Crescent City) with the baseline being 147.9 hospitalizations per 10,000.
Impact	

Community Benefit Contribution/Expense	
Program, Initiative, or Activity Refinement	This initiative was a joint effort by Del Norte County Public Health Mental Health Department and Sutter Coast Hospital. After nearly two years of work (e.g.: multiple meetings between the hospital and the County, program planning, operational planning, grant application, & budget planning), the Del Norte County Department of Mental Health was unable to secure the requisite capital and operational funding. Sutter Coast Hospital offered its land to house the building (at no cost) and agreed to assume fiscal responsibility for some of the day to day personnel expenses. Not with standing's Sutter Coast Hospital's pledge, the project has been placed on hold and will likely remain on hold for the foreseeable future. The county's project funding stream (new projects) continues to shrink secondary to an eroding/declining county tax base. In addition, the funding of the before mentioned County Department of Mental Health tele-psychiatry service was judged to be of higher importance.

Access to Quality Primary Care Health Services

Name of program/activity/initiative	Retention.
Description	Access to primary care services is directly tied to retention and recruitment. Frequently, the importance of retention is overlooked. Will utilize various data sources to discern and identify tactics which increase the likelihood of retaining primary care providers; e.g., increasing connection of the school district for providers with children; connecting new providers (and current) with the Chamber/Visitors Bureau to get more ingrained into the community; looking at social capital and the opportunities for spouses of providers to have enhanced Opportunities in the local job market. Plan to review exit surveys of providers leaving the community to develop an appropriate retention plan.
Goals	For 2017 and 2018, the ratio of total population to I primary care provider will be equal to the baseline.
Anticipated Outcomes	Retaining community providers will improve access to Primary Care Services. When a provider departs, there is a gap in coverage until the person is replaced. If turnover can be avoided, then the gab in coverage will be avoided and thereby, there will be greater access to primary care services.
Plan to Evaluate	The Hospital will evaluate success by tracking the ratio of Total Population to 1 Primary Care Provider.
Metrics Used to Evaluate the program/activity/initiative	Population per Primary Care Provider: Ratio of Total Population to 1 Primary Care Provider. Baseline is Del Norte County 1364. Curry County 1596.

Impact	Over the past couple of years, this has been and remains a high priority. Since 2016, we have not been able to increase the number of primary care providers. There have been a few resignations. With one exception, we have been able to replace the providers who left the community. In retrospect, it is fortunate that recruitment has been a high priority and receiving a lot of attention. If we were not in an active recruitment mode at the time of the resignations, it would have taken a lot longer to find replacements. Key learnings from those who chose to move on indicate the resignations are tied to personal reasons rather than professional reasons. All of those who resigned expressed being well integrated into the larger community, enjoying the community, and finding their professional work extremely gratifying.
Community Benefit Contribution/Expense	Recruitment Firms charge to Coast for finding & securing a provider is $2,500 a month and $25,000 placement fee.
Program, Initiative, or Activity Refinement	Recruitment of primary care providers is and will remain a high priority. The goal is to add two additional full time primary care providers during the coming 12 months. While this section is entitled "retention", its intent is to enhance access to medical care. There were three significant access issues addressed during the measurement period: a) expanding the RHC's hour of operations and participating in two community wide initiatives: b) access to Adult Day Care Services and c) responding to the Opioid Addiction Epidemic.

Name of program/activity/initiative	Recruitment
Description	Sutter Coast Hospital (SCH), United Health Indian Services, and Open Door Community Health Center are the three main constituents who recruit new providers into the SCH service area. In 2014, there was a collaborative effort across the respective organizations to increase the number of primary care providers. Will attempt to resurrect the collaborative effort.
Goals	For 2017 the ratio of total population to I primary care provider will be equal to the baseline. For 2018, the ratio of total population to 1 primary care provider will be 3% better than baseline.
Anticipated Outcomes	The community will experience improved access to primary care services.
Plan to Evaluate	The Hospital will evaluate success by tracking the ratio of Total Population to 1 Primary Care Provider.
Metrics Used to Evaluate the program/activity/initiative	Population per Primary Care Provider: Ratio of Total Population to 1 Primary Care Provider. Del Norte County baseline is 1364. Curry County baseline is 1596.
Impact	Awaiting information from the 2019 Community Health Needs Assessment data crunching.
Community Benefit Contribution/Expense	YE 2015 RHC $66,581 YE 2015 BH $1,244,655

	YE 2016 RHC $165,436 YE 2016 BH $1,227,482 YE 2017 RHC $$250,150 YE 2017 BH $1,114, 980 YE 2018 RHC ($75,023) YE 2018 BH $994,357
Program, Initiative, or Activity Refinement	Over the past couple of years, this has been and remains a high priority as evidence by year over year benefit increases.

Access to Specialty Care

Name of program/activity/initiative	Recruitment
Description	While retaining current physicians, continue to recruit into the following specialty disciplines: Obstetrics, Orthopedics, Pulmonology, G.I., and ENT.
Goals	For 2017 and 2018, the rate of preventable hospital stays per 1,000 Medicare enrollees will be less than the baseline of 51 stays per 1,000 Del Norte County Medicare enrollees.
Anticipated Outcomes	With increased access to Specialty Care, the number of preventable hospital stays should decline – with the assistance of specialist, patients are avoiding medical crisis which result in hospitalizations.
Plan to Evaluate	Within two months of the data being publicly released, the evaluation will occur.
Metrics Used to Evaluate the program/activity/initiative	Preventable Hospitalizations per 1,000 Medicare Enrollees.
Impact	Providing direct local access to specialty care has been significant in helping patients avoid medical crisis by bringing treatment and resolution to their care needs timely. Additionally providing local access allows for those who are unable to travel to receive appropriate care.
Community Benefit Contribution/Expense	YE 2015 SCCC $1,604,410 YE 2015 Walk In Patients Sent to ER $9,424 YE 2016 SCCC $2,201,978 YE 2016 Walk In Patients Sent to ER $12,474 YE 2017 SCCC $2,189,232 YE 2017 Walk In Patients Sent to ER $13,465 YE 2018 SCCC $2,471,085 YE 2018 Walk In Patients Sent to ER $13,193
Program, Initiative, or Activity Refinement	Over the past couple of years, this has been and remains a high priority as evidenced by year over year benefit increases.

Access to Transportation

<table>
<tr><td>Name of program/activity/initiative</td><td>Transportation Assistance Program</td></tr>
<tr><td>Description</td><td>Provide funds to off-set the transportation expense when a specific set of circumstances exits. The circumstances being the post-discharge transportation of patients back to residence in SCH's service area when such patients are transferred out of the area for specialty care or emergency services not available at SCH. The purpose of the Transportation Assistance Program is to assist eligible patients in returning to the area after being discharged from the receiving facility/hospital and not for transporting patients back to SCH. Patients eligible for the program must meet the circumstances described plus meet income eligibility requirements.

This initiative is collaborative effort among several community agencies. The program will be administered by SCH. The following table identifies the cash contributions from the various involved agencies:

<table>
<tr><td>Sutter Coast Hospital</td><td>$27,000</td></tr>
<tr><td>Del Norte Local Transportation Commission</td><td>Up to $27,000 (Per CA statute, based on 5% of the State TDA fund estimate)</td></tr>
<tr><td>Del Norte Healthcare District</td><td>$13,500</td></tr>
<tr><td>Open Door Community Health Centers</td><td>Services</td></tr>
<tr><td>Del Norte County Department of Health & Human Services</td><td>Services up to $5,000</td></tr>
</table>
</td></tr>
<tr><td>Goals</td><td>For eligible patients, to expend roughly $70,000 starting 12/01/2016 through 12/31/18 on transporting and returning patients to the SCH service area.</td></tr>
<tr><td>Anticipated Outcomes</td><td>For eligible patients, to lessen the financial burden associated with returning to their homes.</td></tr>
<tr><td>Plan to Evaluate</td><td>Since SCH will administer the program, SCH will track the project utilization and expense data. Project data will include pertinent patient demographic information, transportation from location, transportation to location, name of transport provider, and fee paid to the transporting service provider. This information will be compiled and reviewed quarterly. The data will be shared with the respective funding agencies. An annual report will be compiled and at a minimum, be shared with the project funding agencies.</td></tr>
<tr><td>Metrics Used to Evaluate the program/activity/initiative</td><td>For eligible patients, to expend roughly $70,000 starting 12/01/2016 through 12/31/18 on transporting and returning patients to the SCH service area.</td></tr>
<tr><td>Impact</td><td>Several agencies came together to offset project startup cost plus fund on-going day to day operating expenses as noted above. Coinciding with</td></tr>
</table>

	the project implementation, an important MediCal healthcare benefit was implemented. Reimbursing patient transportation expenses became a Medi-Cal covered benefit (e.g.: Partnership Health). Since potential recipients needed to meet a "means test" and someone meeting the "means test" likely would qualify for MediCal, no patients were transported under the project sponsorship. For other reasons, patients received transportation assistance.
Community Benefit Contribution/Expense	YE 2015 (taxis) $7,814 YE 2016 (transportation assistance project) $43,555 YE 2016 (taxis) $9,404 YE 2017 (taxis) $12,126 YE 2018 (taxis) $9,776.50 ($4,015 in Taxis and $9,776.50 in Curry Public Transit)
Program, Initiative, or Activity Refinement	Medi-Cal implemented a significant change in plan benefits. As of 2017, Medi-Cal pays transportation coast associated with returning a patient to their private residence when it was necessary to transfer patients to another hospital for a higher level of care. Hence, this benefit is redundant to the Patient Transportation Assistant Project. In 2018, the 2016 funds were returned to the initial funding agencies – including Sutter Coast Hospital.

Conclusion

Nonprofit hospitals play a vital role in the communities they serve. In addition to providing for the delivery of newborns and the treatment of disease, these important institutions work with and alongside other organizations to improve community health and well-being by working to prevent disease, improve access to healthcare, promote health education, eliminate health disparities, and similar tasks. CHNAs play an important role in helping nonprofit hospitals and other community organizations determine where to focus community benefit and improvement efforts, including geographic locations and specific populations living in their service area.

Sutter Coast Hospital 2019 CHNA Technical Section

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

Results of Data Analysis Sutter Coast Hospital CHNA

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. Each indicator value for Del Norte County was compared to the California state benchmark. Indicators where performance was worse in Del Norte County than in California are highlighted. Rates for Curry County and the State of Oregon are also included. The associated bar charts show rates for each county compared to their respective state rates.

Length of Life

Table 3: Length of Life Indicators Compared to State Benchmarks

Indicators	Description	Del Norte	Curry	California	Oregon
Premature Age-Adjusted Mortality	Age-adjusted deaths among residents under age 75 per 100,000	460.4	425.6	268.8	309.9
Years of Potential Life Lost	Age-adjusted years of potential life lost before age 75 per 100,000	8,127.9	9,809.3	5,217.3	6,016.4
Stroke Mortality	Deaths per 100,000	41.7	120.7	37.5	48.8
CLD Mortality	Deaths per 100,000	68.3	165.4	34.9	52.3
Diabetes Mortality	Deaths per 100,000	22.4	53.7	22.1	31.1
Heart Disease Mortality	Deaths per 100,000	213.5	348.8	157.3	175.1
Hypertension Mortality	Deaths per 100,000	10.6	26.8	12.6	14.0
Cancer Mortality	Deaths per 100,000	189.4	415.8	153.4	202.8
Liver Disease Mortality	Deaths per 100,000	17.0	NA	13.2	NA
Kidney Disease Mortality	Deaths per 100,000	11.5	8.9	8.3	10.0
Suicide Mortality	Deaths per 100,000	16.7	49.2	10.8	19.4
Unintentional Injury Mortality	Deaths per 100,000	67.0	76.0	31.2	52.9
Alzheimer's Mortality	Deaths per 100,000	17.9	58.1	35.0	44.8
Influenza and Pneumonia Mortality	Deaths per 100,000	21.0	13.4	16.0	11.4

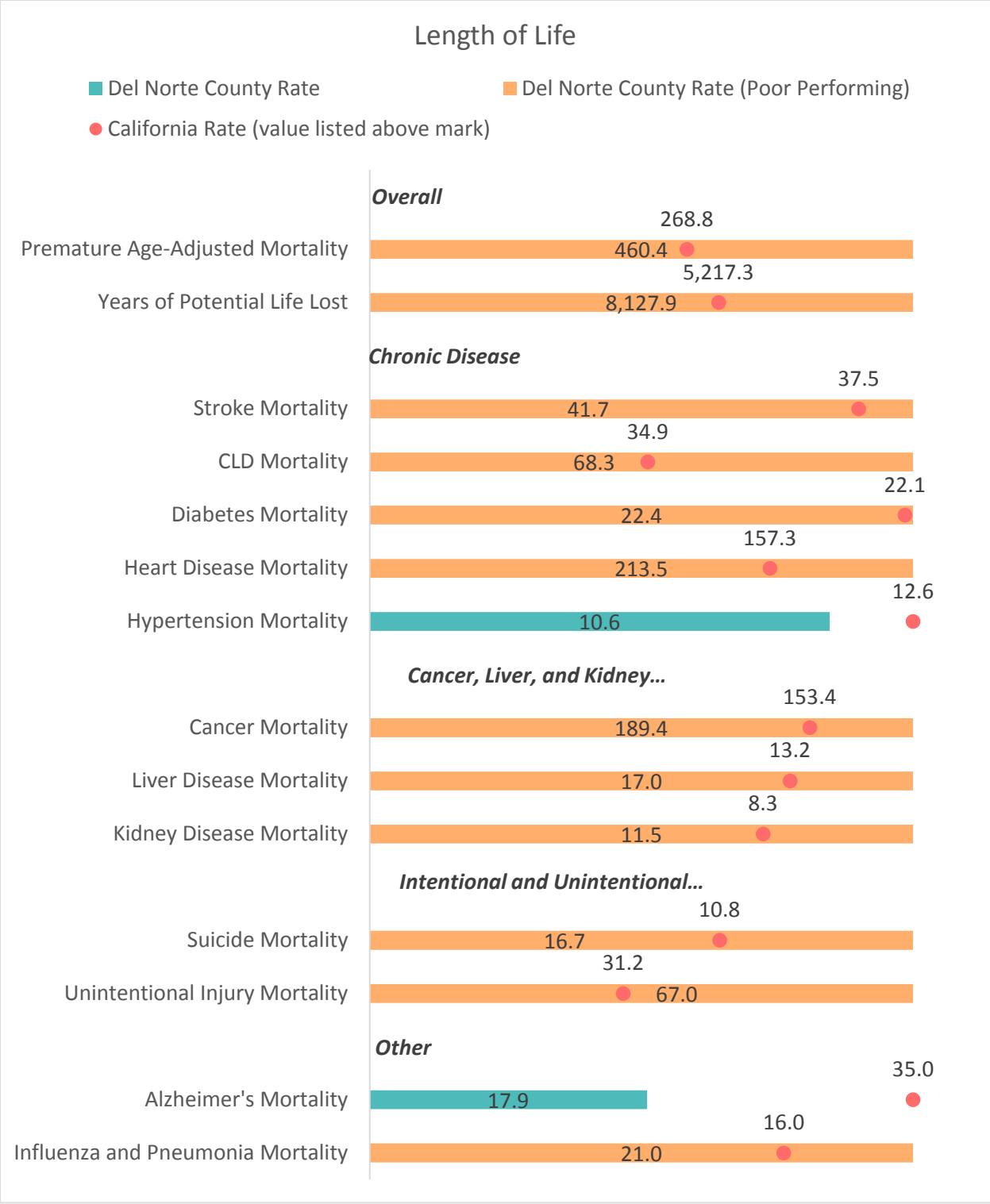

Figure 4 Del Norte County length of life indicators

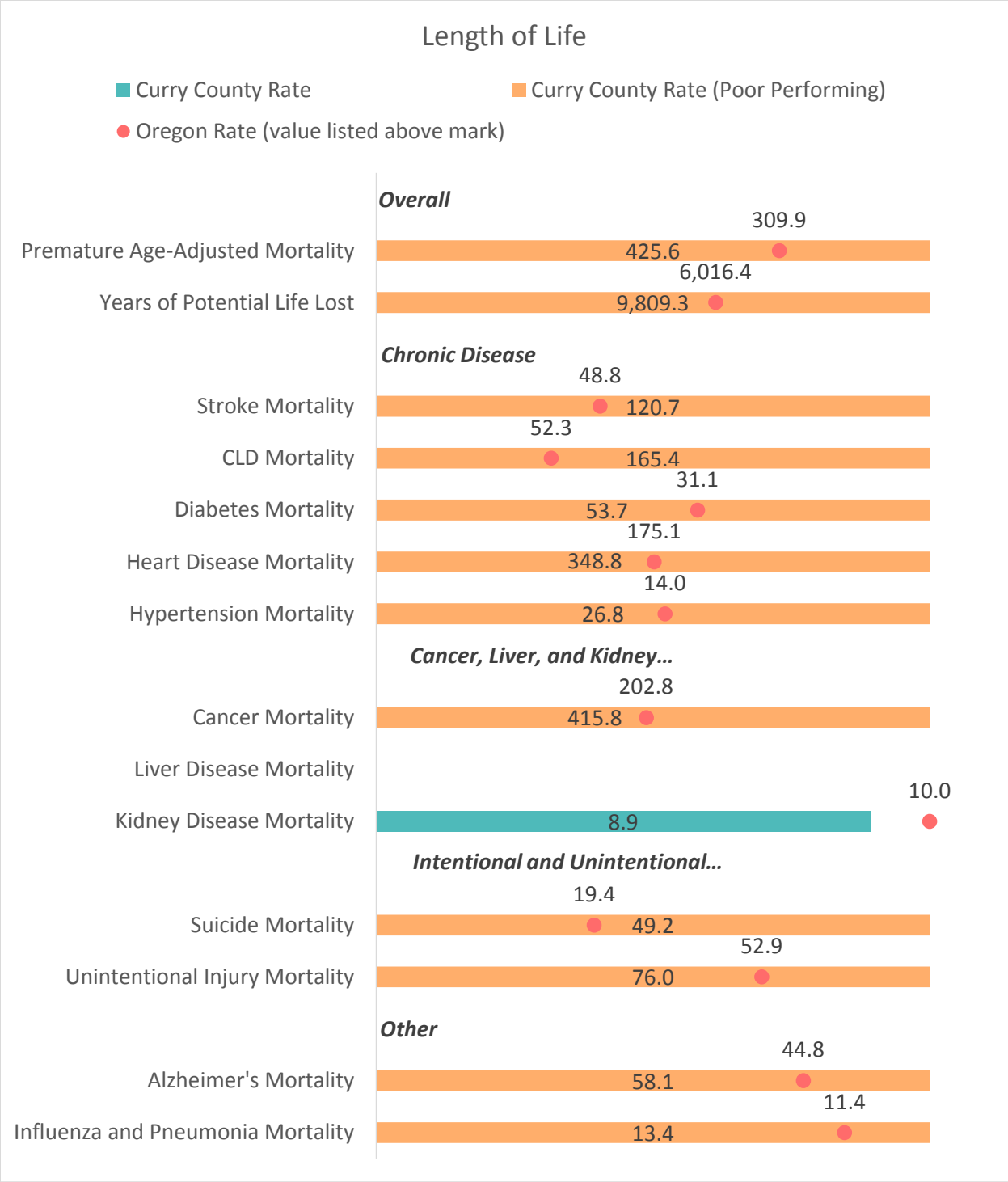

Figure 5 Curry County length of life indicators

Quality of Life

Table 4: Quality of Life Indicators Compared to State Benchmarks

Indicators	Description	Del Norte	Curry	California	Oregon
Chronic Disease					
Diabetes Prevalence	Percentage age 20 and older with diagnosed diabetes	8.6	12.5	8.5	9.3
Low Birth Weight	Percentage of live births with birthweight below 2500 grams	5.3	6.1	6.8	6.3
HIV Prevalence	Persons age 13 or older with a(n) Human Immunodeficiency Virus (HIV) infection per 100,000	77.7	64.9	376.4	193.7
Percentage with Disability	Percentage of total civilian noninstitutionalized population with a disability	22.5	25.5	10.6	14.7
Mental Health					
Poor Mental Health Days	Age-adjusted average number of mentally unhealthy days reported in past 30 days	4.1	4.4	3.5	4.5
Poor Physical Health Days	Age-adjusted average number of physically unhealthy days reported in past 30 days	4.0	4.0	3.5	3.8
Cancer					
Cancer Female Breast	Age-adjusted incidence per 100,000	108.6	112.5	120.6	124.9
Cancer Colon and Rectum	Age-adjusted incidence per 100,000	39.7	33.0	37.1	34.8
Cancer Lung and Bronchus	Age-adjusted incidence per 100,000	56.8	61.6	44.6	56.2
Cancer Prostate	Age-adjusted incidence per 100,000	104.4	51.8	109.2	95.4

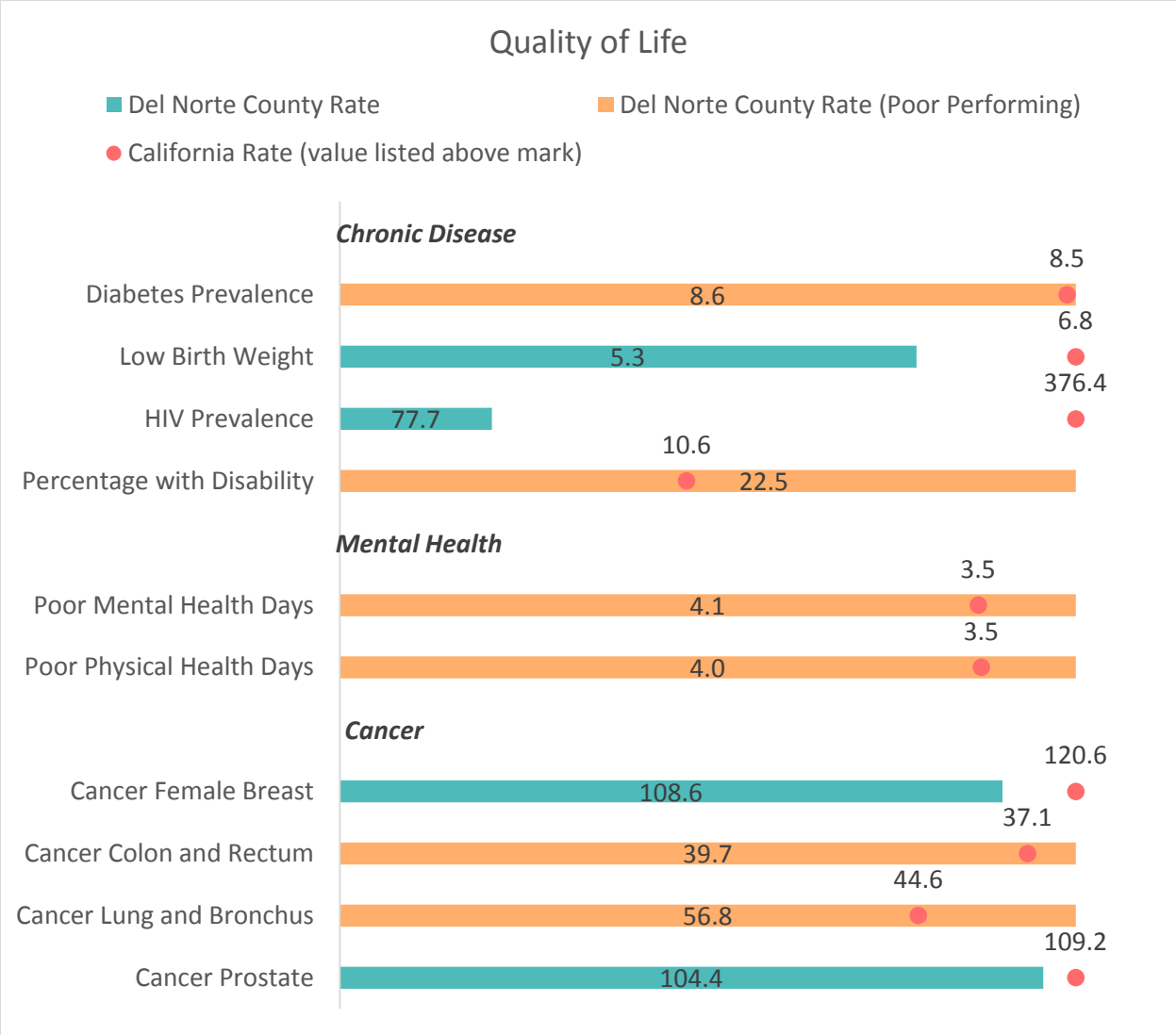

Figure 6 Del Norte County quality of life indicators

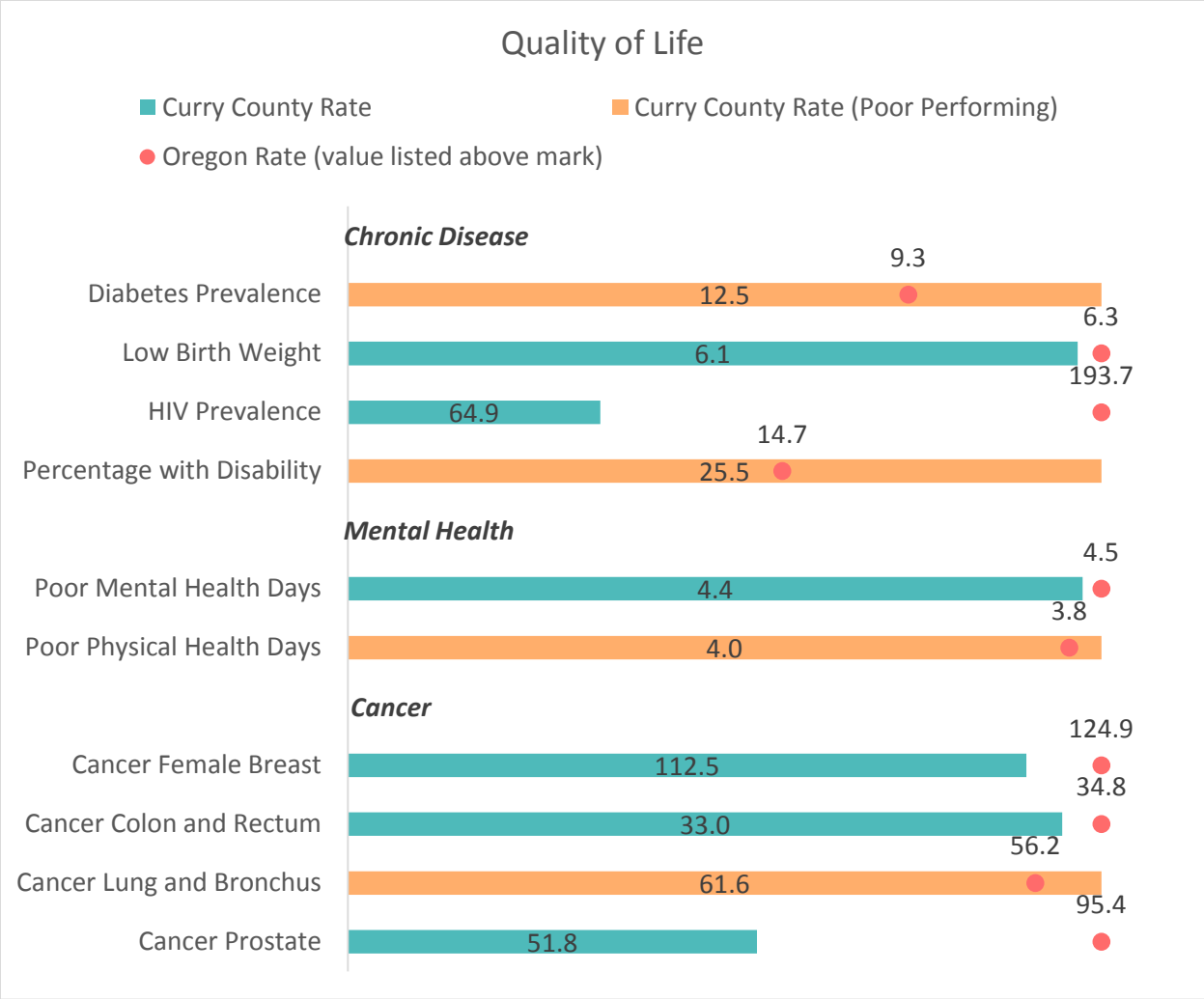

Figure 7 Curry County quality of life indicators

Health Behaviors

Table 5: Health Behavior Indicators Compared to State Benchmarks

Indicators	Description	Del Norte	Curry	California	Oregon
Excessive Drinking	Percentage of adults reporting binge or heavy drinking	19.2	15.9	17.8	18.5
Drug Overdose Deaths	Age-adjusted deaths per 100,000	16.4	22.2	12.2	12.7
Adult Obesity	Percentage of adults reporting BMI of 30 or more	24.5	31.0	22.7	27.2
Physical Inactivity	Percentage age 20 and older with no reported leisure-time physical activity	18.8	18.5	17.9	15.8
Limited Access to Healthy Food	Percentage of population that is low-income and does not live close to a grocery store	14.0	5.1	3.3	5.4
mRFEI	Percentage of food outlets that are classified as 'healthy'	22.2	29.0	12.3	14.8
Access to Exercise	Percentage of population with adequate access to locations for physical activity	77.7	93.6	89.6	77.5
STI Chlamydia Rate	Number of newly diagnosed chlamydia cases per 100,000	345.4	228.3	487.5	410.7
Teen Birth Rate	Number of births per 1,000 females aged 15-19	50.0	25.0	24.1	22.2
Adult Smokers	Percentage of adults who are current smokers	15.1	14.9	11.0	16.2

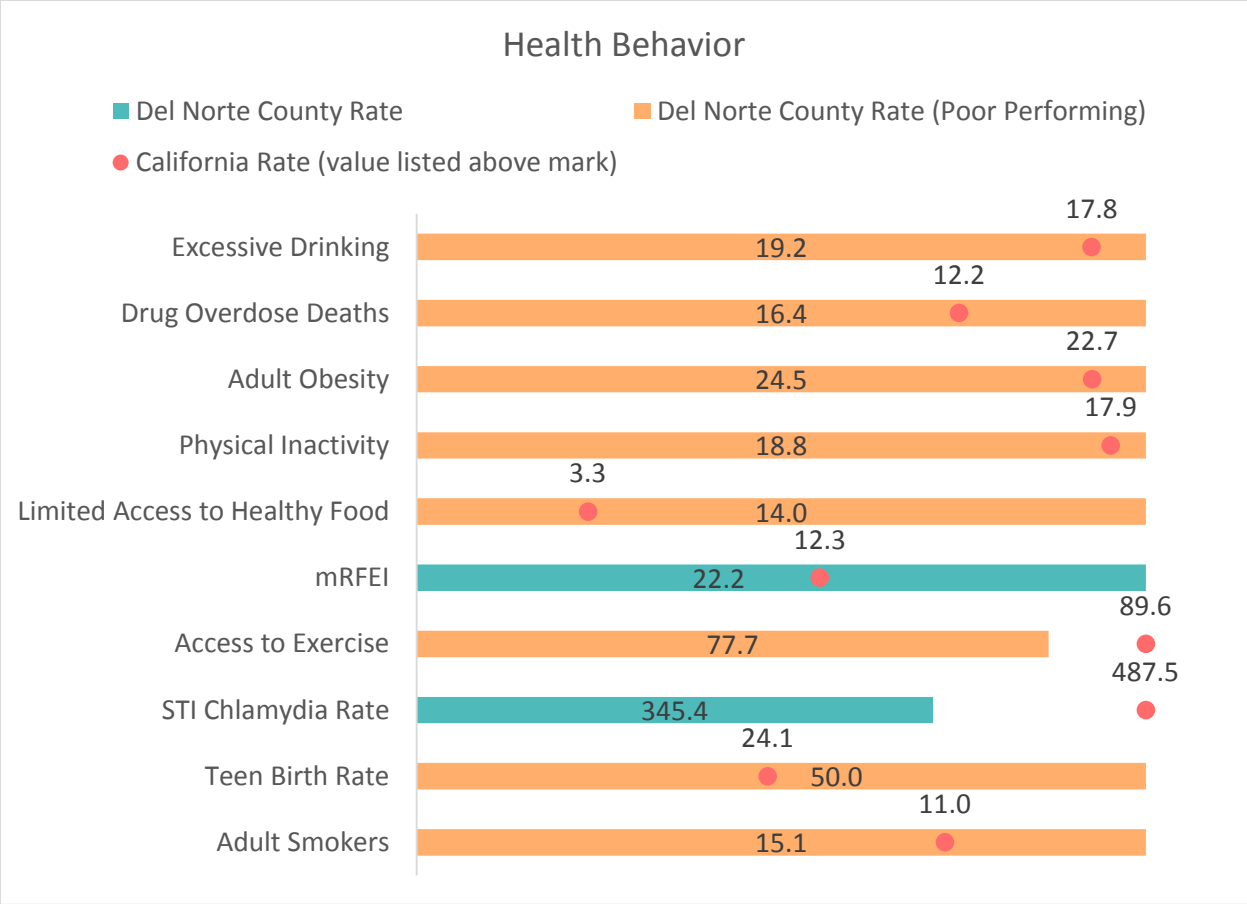

Figure 8 Del Norte County health behavior indicators

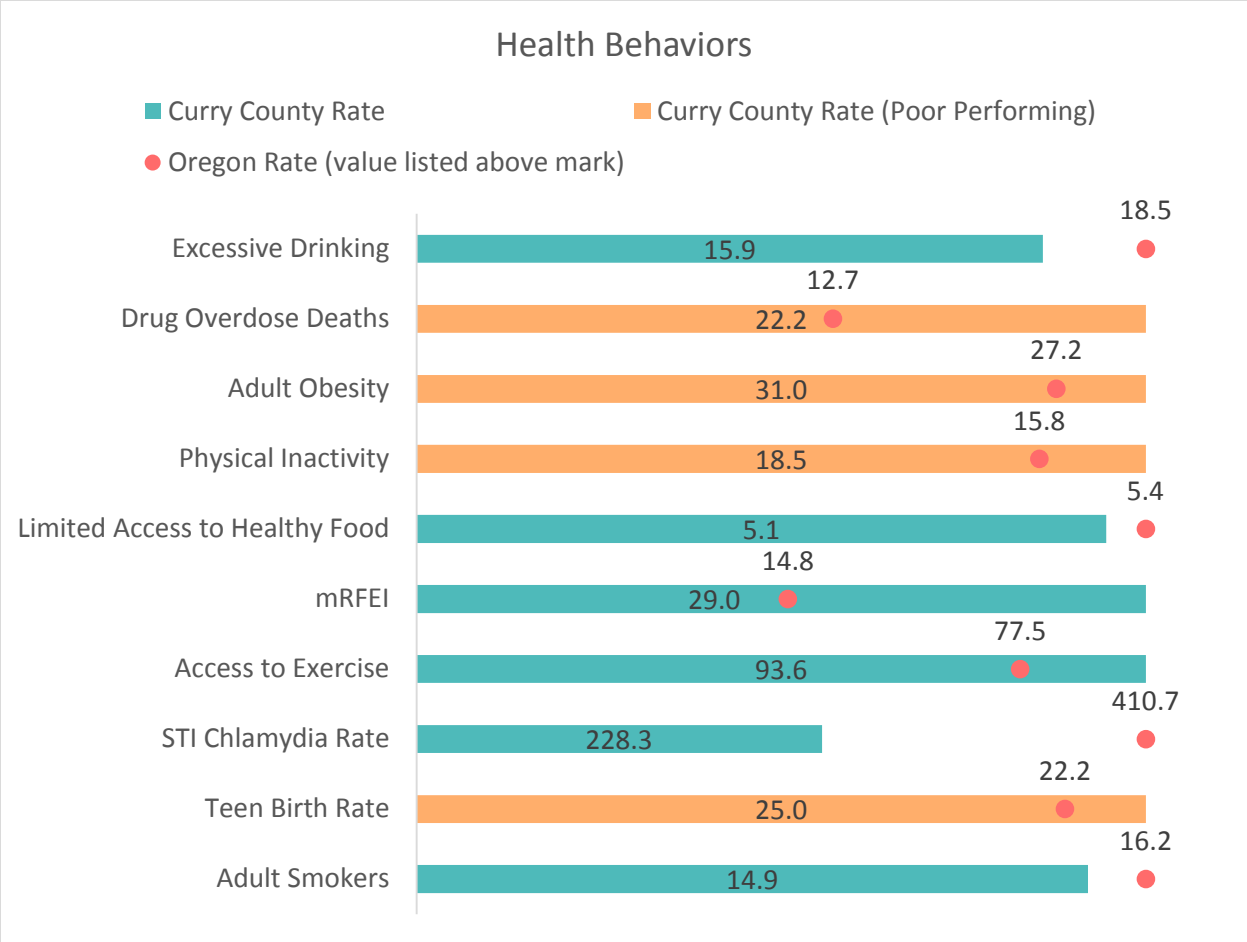

Figure 9 Curry County health behavior indicators

Clinical Care

Table 6: Clinical Care Indicators Compared to State Benchmarks

Indicators	Description	Del Norte	Curry	California	Oregon
Healthcare Costs	Amount of price-adjusted Medicare reimbursements per enrollee	$7,723	$7,683	$9,100	$7,621
HPSA Dental Health	Reports if a portion of the county falls within a Health Professional Shortage Area	Yes	Yes		
HPSA Mental Health	Reports if a portion of the county falls within a Health Professional Shortage Area	Yes	Yes		
HPSA Primary Care	Reports if a portion of the county falls within a Health Professional Shortage Area	Yes	Yes		
HPSA Medically Underserved Area	Reports if a portion of the county falls within a Medically Underserved Area	Yes	Yes		
Mammography Screening	Percentage of female Medicare enrollees aged 67-69 that receive mammography screening	57.4	56.8	59.7	61.3
Dentists	Number per 100,000	79.9	57.2	82.3	78.6
Mental Health Providers	Number per 100,000	377.6	325.8	308.2	441.7
Psychiatry Providers	Number per 100,000	10.8	4.5	13.4	10.7
Specialty Care Providers	Number per 100,000	50.4	40.3	183.2	192.0
Primary Care Physicians	Number per 100,000	66.0	71.2	78.0	93.5
Preventable Hospital Stays	Number of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	33.0	31.7	36.2	33.9

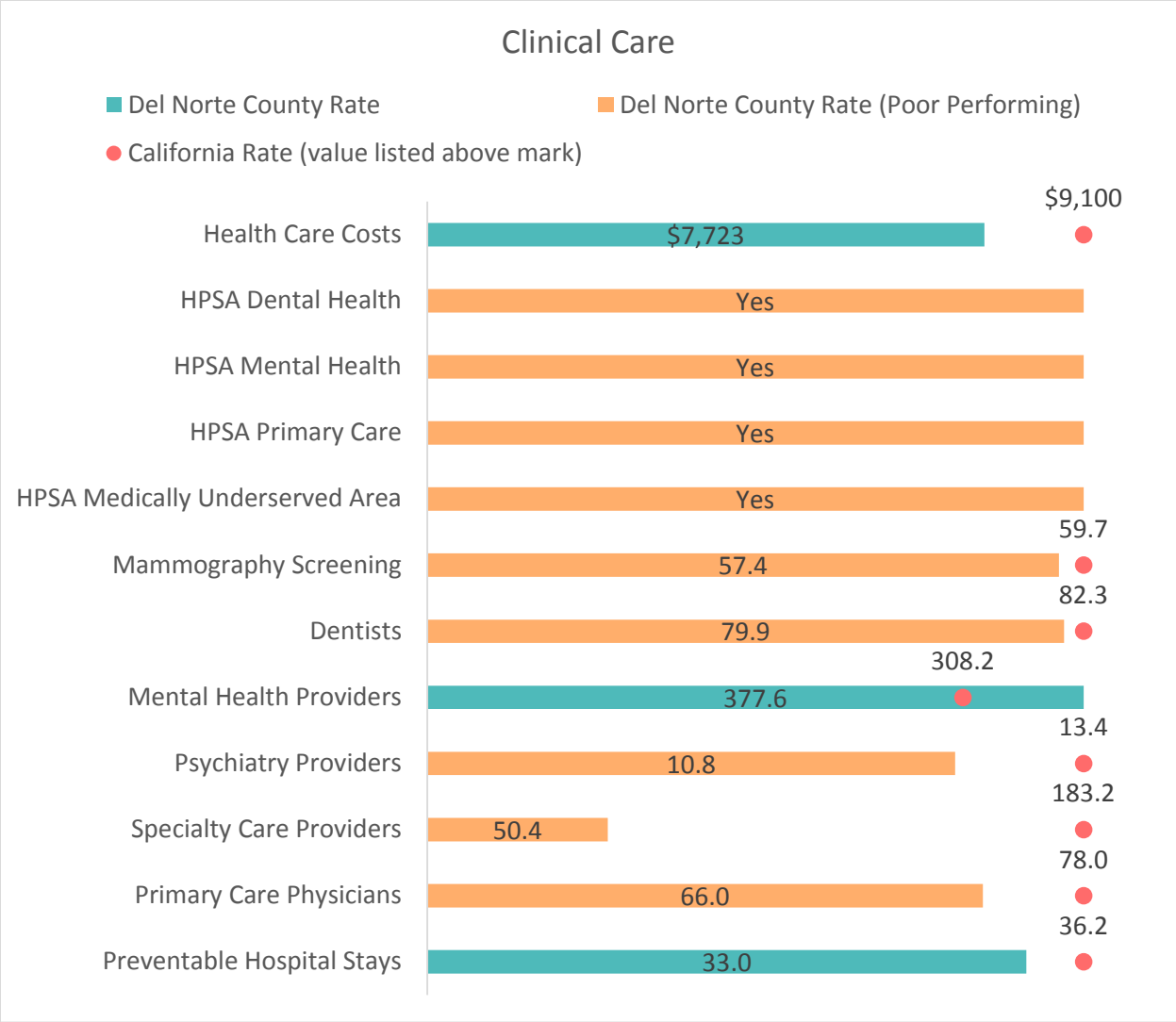

Figure 10 Del Norte County clinical care indicators

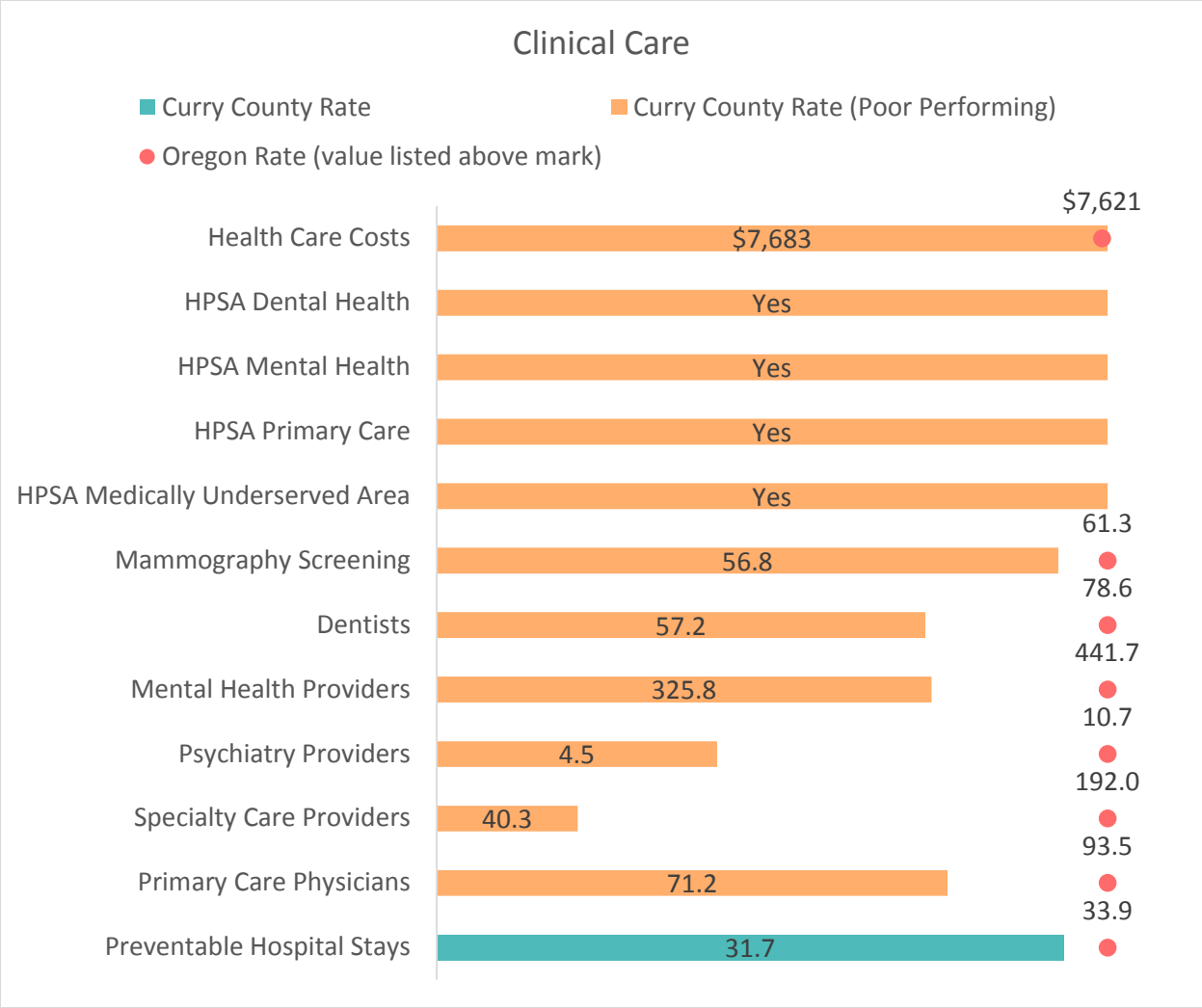

Figure 11 Curry County clinical care indicators

Social and Economic Factors

Table 7: Social and Economic Factor Indicators Compared to State Benchmarks

Indicators	Description	Del Norte	Curry	California	Oregon
Homicides	Deaths per 100,000	7.2		5.0	2.8
Violent Crimes	Reported violent crime offenses per 100,000	582.3	105.8	407.0	244.6
Motor Vehicle Crash Deaths	Deaths per 100,000	26.1	21.0	8.5	9.7
Some College	Percentage aged 25-44 with some post-secondary education	43.5	56.3	63.5	68.4
High School Graduation	Percentage of ninth-grade cohort graduating high school in 4 years	35.1	68.8	82.3	74.7
Unemployed	Percentage of population 16 and older unemployed but seeking work	7.5	6.9	5.4	4.9
Children with Single Parents	Percentage of children living in a household headed by a single parent	44.3	35.0	31.8	30.8
Social Associations	Membership associations per 100,000	6.2	12.0	5.8	10.2
Free and Reduced Lunch	Percentage of children in public schools eligible for free or reduced-price lunch	62.5	61.2	58.9	51.4
Children in Poverty	Percentage of children under age 18 in poverty	30.0	24.5	19.9	17.2
Median Household Income	Median household income	$39,458	$40,682	$67,715	$57,379
Uninsured	Percentage of population under age 65 without health insurance	8.1	9.9	9.7	8.4

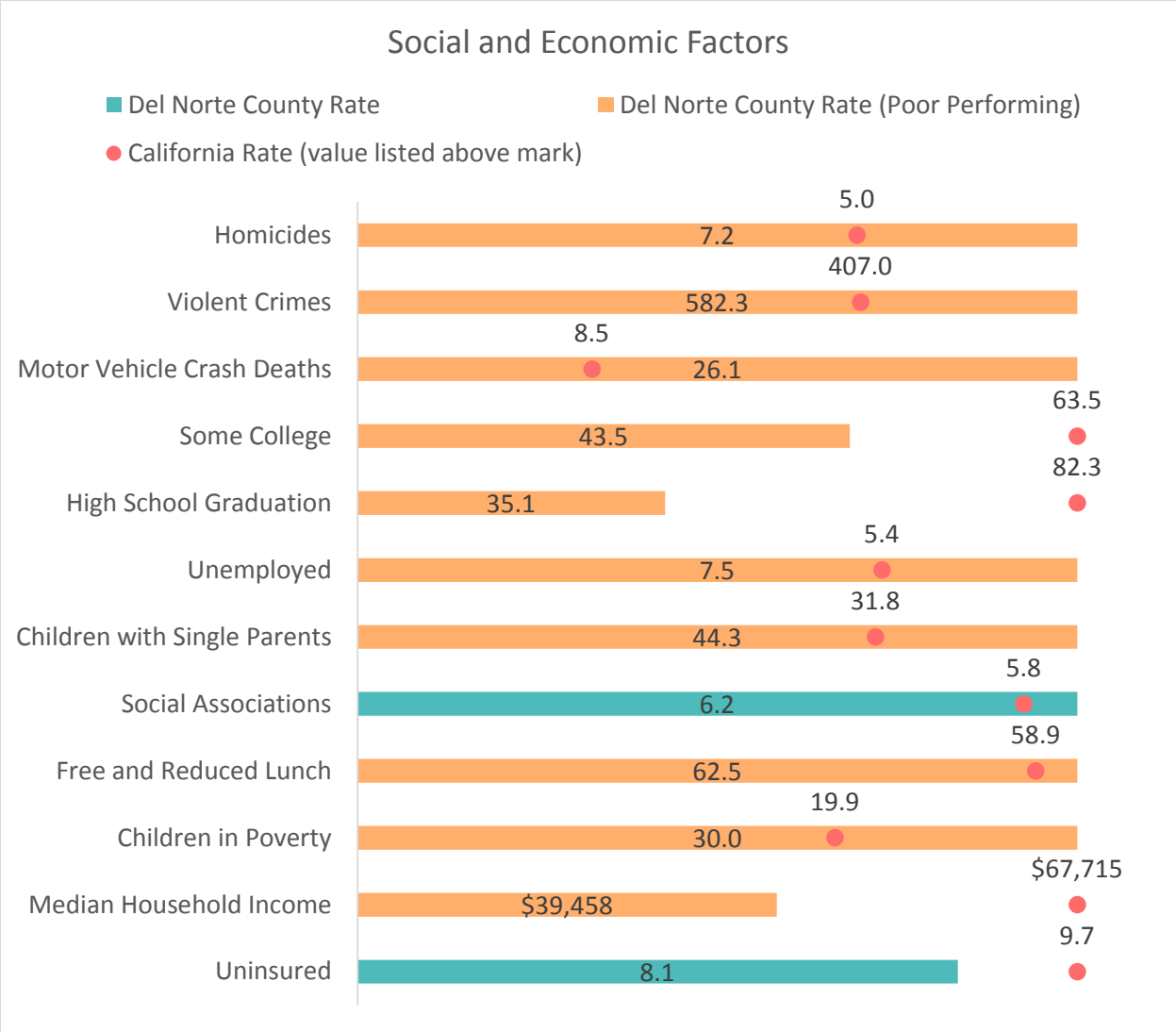

Figure 12 Del Norte County social and economic factor indicators

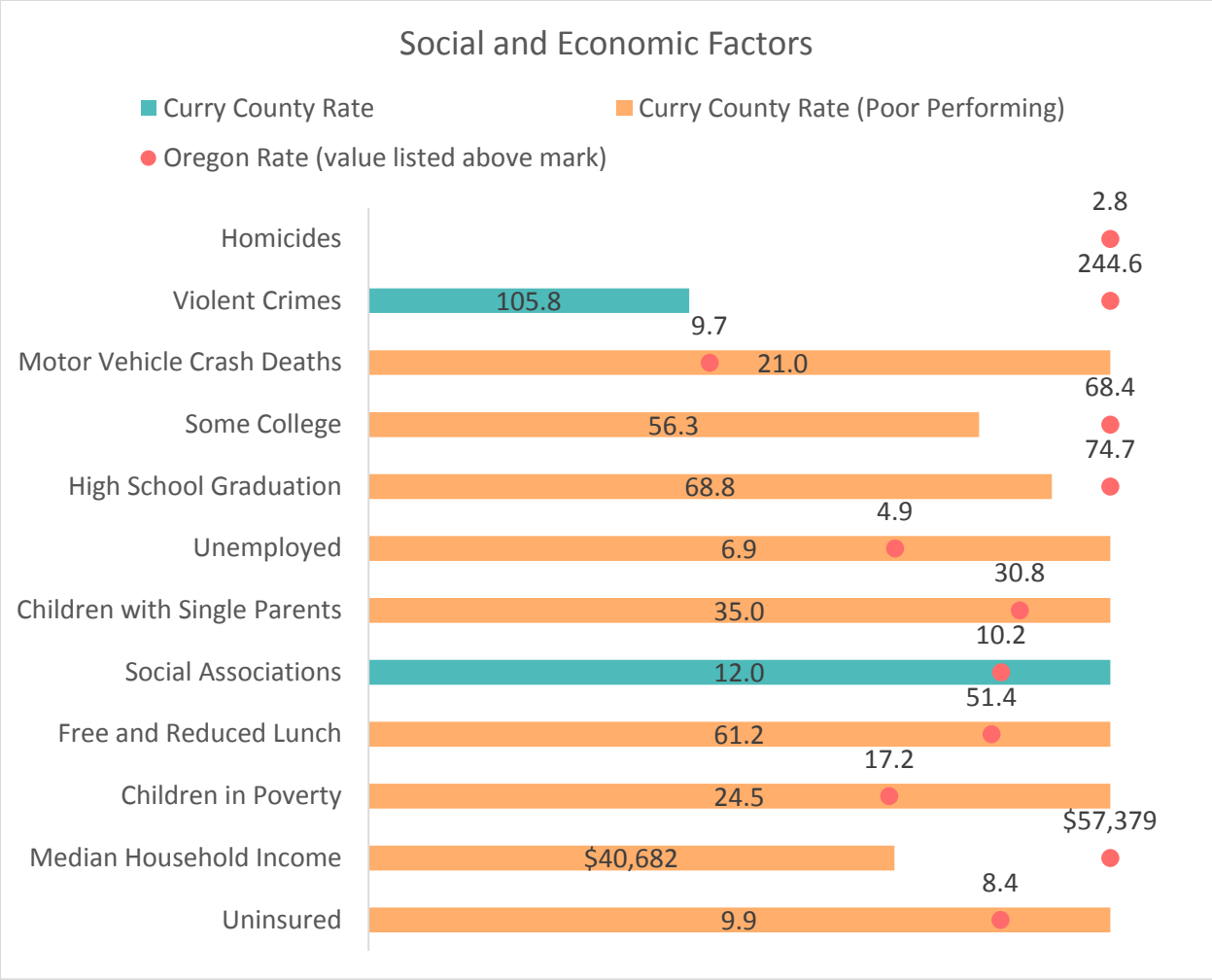

Figure 13 Curry County social and economic factor indicators

Physical Environment

Table 8: Physical Environment Indicators Compared to State Benchmarks

Indicators	Description	Del Norte	Curry	California	Oregon
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	25.0	17.7	27.9	20.5
Housing Units With No Vehicle	Percentage of households with no vehicle available	10.2	4.9	7.6	7.9
Public Transit Proximity	Percentage of population living in a Census block within a quarter of a mile to a fixed transit stop	78.1	20.6		
Pollution Burden	Percentage of population living in a Census tract with a CalEnviroscreen Pollution Burden score greater than the 50th percentile for the state	0.0	NA	50.4	NA
Air Particulate Matter	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	5.8	5.6	8.0	7.0
Drinking Water Violations	Reports whether or not there was a health-related drinking water violation in a community within the county	Yes	No		

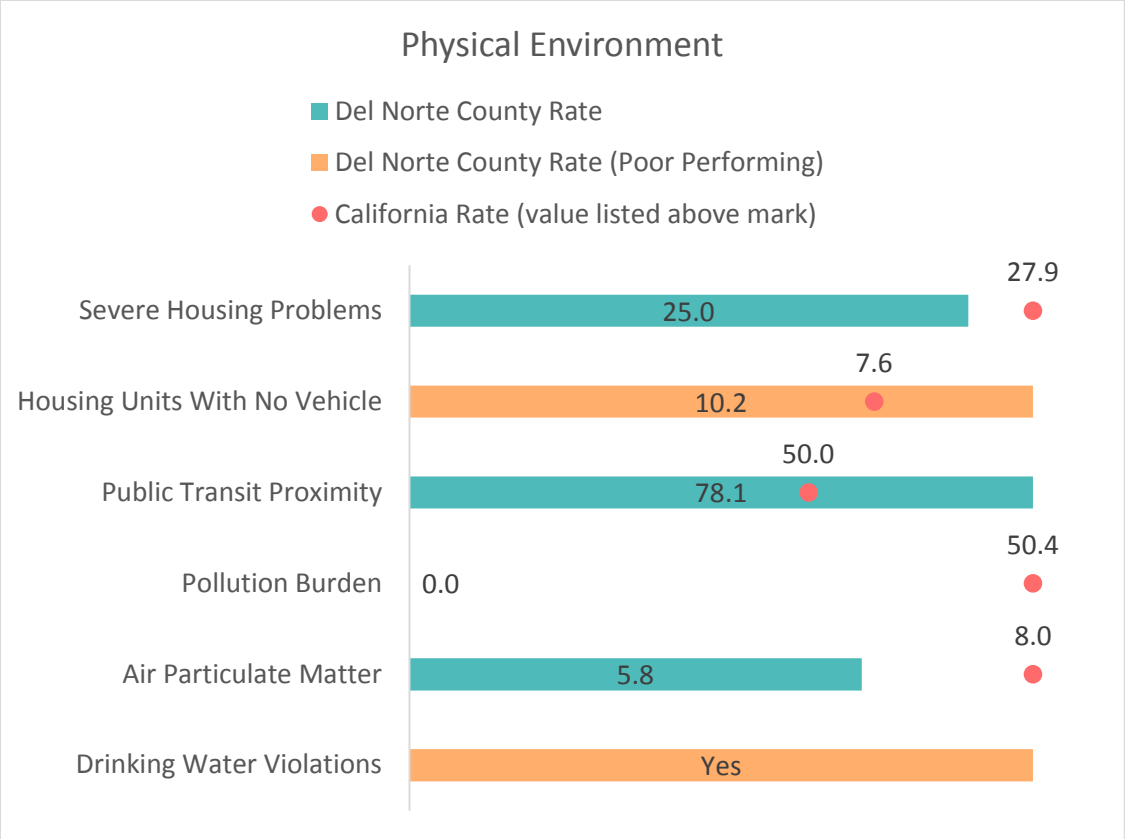

Figure 14 Del Norte County physical environment indicators

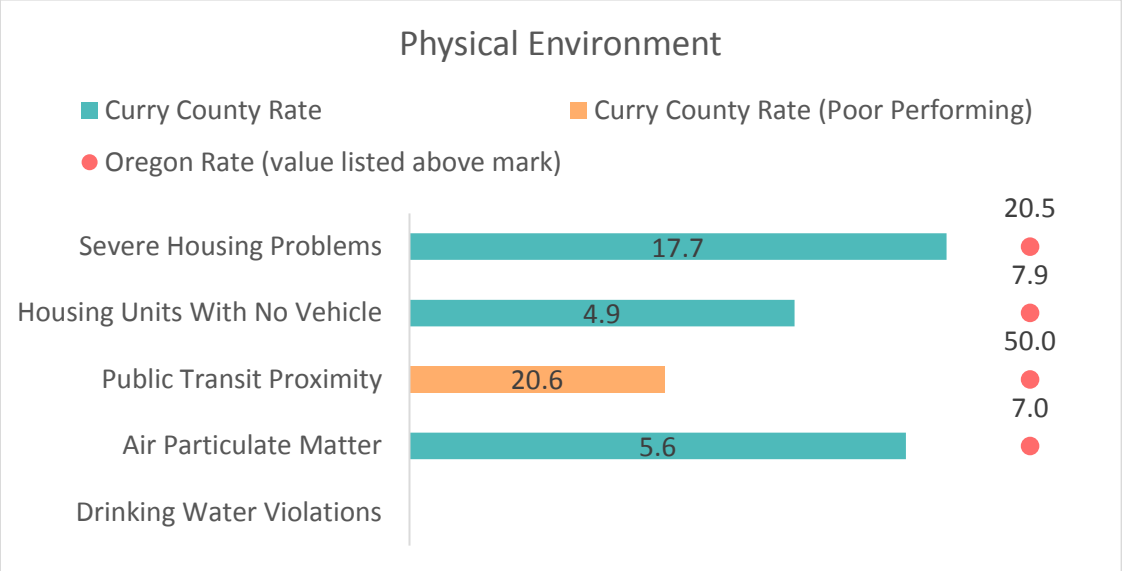

Figure 15 Curry County physical environment indicators

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

This model was used to guide the selection of secondary indicators in this analysis as well as to express in general how these upstream health factors lead to the downstream health outcomes. It also suggests that poor health outcomes within 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.

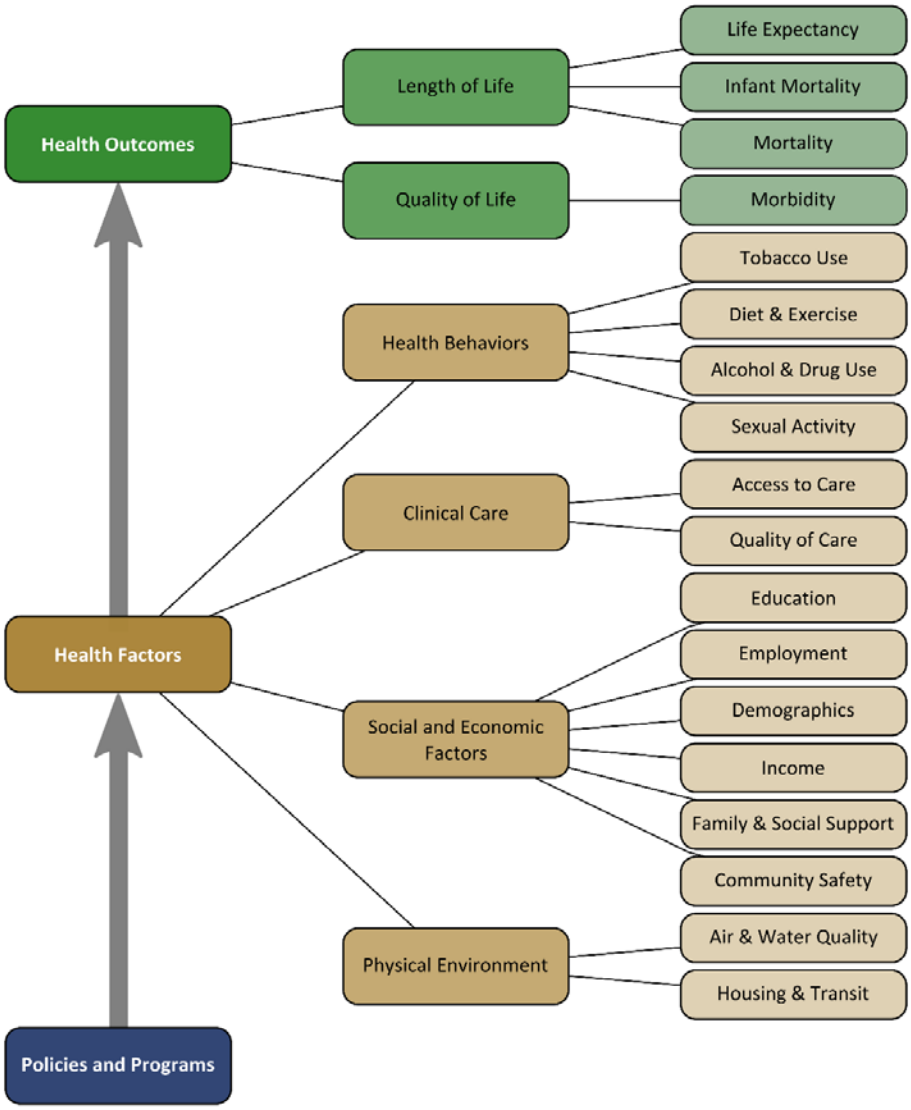

Figure 16: Community Health Assessment Conceptual Model as modified from the County Health Rankings Model, Robert Wood Johnson Foundation, and University of Wisconsin, 2015

Process Model

Figure 17 outlines the data collection and analysis stages of this process. The project began by confirming the HSA for Sutter Coast Hospital for which the CHNA would be conducted. Primary data collection included both key informant and focus-group interviews with community health experts and residents. Initial key informant interviews were used to identify areas or population subgroups within the county experiencing health disparities.

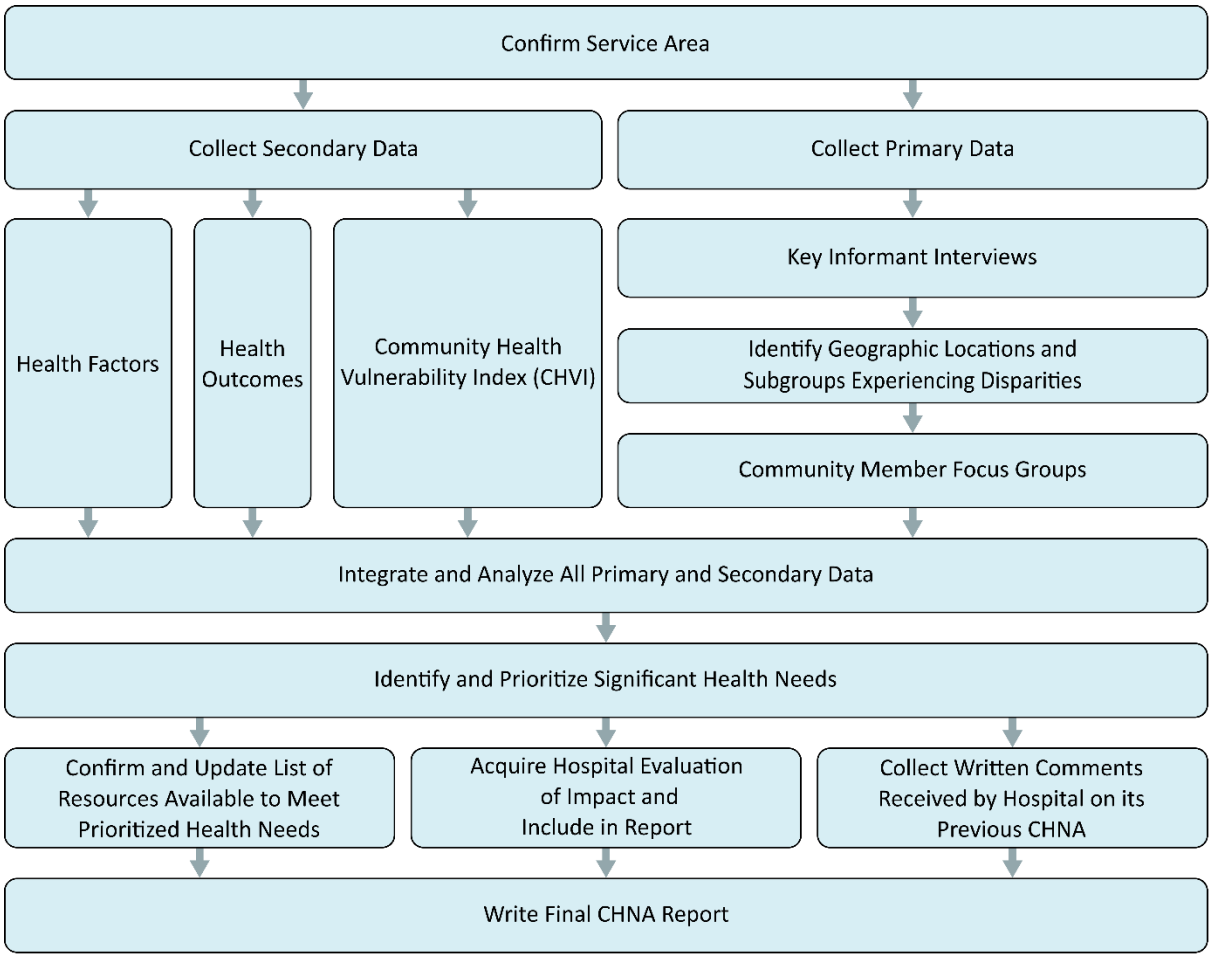

Figure 17: CHNA process model for SCH

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

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

Primary Data Collection and Processing

Primary Data Collection

Input from the community served by SCH 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 9 contains a listing of community health experts, or key informants, that contributed input to the CHNA. The table describes the name of the represented organization, the number of participants and area of expertise, the populations served by the organization, and the date of the interview.

Table 9: Key Informant List

Organization	Number of Participants	Area of Expertise	Populations Served	Date
Sutter Coast Hospital	8	Healthcare provider	Residents of Del Norte County and Brookings Harbor, Curry County, Oregon	7/17/18
Del Norte Department of Human Services, including Public Health	1	Community health, public health, prevention	All residents of Del Norte county	7/18/18
Curry Community Health/County Public Health	1	Community health service delivery including prevention	All residents of Brookings Harbor, Oregon	7/18/18
First 5 Del Norte	1	Children's community health, early childhood development	All Residents of Del Norte County	8/7/18

Rural Human Services	1	Food and family services	All residents of Del Norte County including low-income at risk, housing/food insecure, homeless	8/8/18
College of the Redwoods	1	Educational needs as they relate to social determinants of health	All residents of Del Norte County	8/8/18
Del Norte Community Health Centers / Open Door Clinic	2	Healthcare services and preventative care	All residents of Del Norte County including low-income, at risk, housing insecure, homeless	8/8/18
United Indian Health Services	1	Healthcare service and preventative care	Native American living in Del Norte and Humboldt Counties	8/31/18
Del Norte County Board of Supervisors	1	County Government	All residents of Del Norte County	9/12/18
Local Physician	1	Healthcare delivery of services	All residents of Del Norte County	9/17/18
Del Norte County Board of Supervisors	1	County Government	All residents of Del Norte County	9/27/18

Key Informant Interview Guide

The following questions served at the interview guides for both key informant and focus group interviews:

Key Informant Interview Guide

1) BACKGROUND

a) Tell me about your current role and the organization you work for?

b) How would you define the community (ies) you serve or live in?
    i) Consider:
        (1) Specific geographic areas?
        (2) Specific populations served?
            (a) Who? Where? Racial/ethnic make-up, physical environment (urban/ rural, large/small

2) HEALTH ISSUES

a) What are the biggest health needs in the community?
    i) *INSERT MAP exercise: Please use this map to help our team understand where communities that experience health burdens live?*
        (1) Consider:
            (a) What specific geographic locations struggle with health issues the most?
            (b) What specific groups of community members experience health issues the most?

b) What historical/societal influences have occurred since the last assessment (2015-16) that should be taken into consideration around health needs?

3) CHALLENGES/BARRIERS

a) What are the challenges (barriers) to being healthy for the community?
    i) Consider:
        (1) Health Behaviors
        (2) Social factors
        (3) Economic factors
        (4) Clinical Care factors
        (5) Physical (Built) environment

4) SOLUTIONS

a) What solutions will address the health needs and or challenges mentioned?
    i) Consider:
        (1) Health Behaviors
        (2) Social factors
        (3) Economic factors
        (4) Clinical Care factors
        (5) Physical (Built) environment

5) **PRIORITY: Based on what we have discussed so far, what are currently the most important or urgent top 3 health issues or challenges to address in order to improve the health of the community?**

6) RESOURCES

a) What resources exist in the community to help people live healthy lives?
    i) Consider:
        (1) Barriers to accessing these resources.
        (2) New resources that have been created since 2016
        (3) New partnerships/projects/funding

7) What other people, groups or organizations would you recommend we speak to about the health of the community?

    i) Name 3 types of service providers that you would suggest we include in this work?
    ii) Name 3 types of community members that you would recommend we speak to in this work?

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

Focus Group Results

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

Table 10 contains a listing of community resident groups that contributed input to the CHNA. The table describes the location of the focus group, the date it occurred, the total number of participants, and demographic information for focus group members.

Table 10: Focus Group List

Location	Date	Number of Participants	Demographic Information
Brookings Harbor Community Advisory Council	8/7/18	8	Community members: Curry County, Oregon, including retirees, low-income and housing insecure
Del Norte Community Health Centers / Open Door Clinic	9/18/18	11	Community members: Low-income, housing insecure, homeless, English and Spanish speaking, Native Americans
Rural Human Services	9/19/18	12	Low-income, at risk, housing insecure, and disabled community members from Del Norte County
Family Resource Center of the Redwoods	9/19/18	6	Community members: Families, young adults, low-income

Focus Group Interview Guide

The following questions served as the interview guide for focus groups.

1. **BACKGROUND**
    a. Where in the county (HSA) do you live?
        i. Specific town? General area?
    b. How would you describe the community (ies) you live in using a few words?
        i. Probe for:
            1. Specific geographic areas?
            2. Specific populations served?
                1. *Who? Where? Racial/ethnic make-up, physical environment (urban/ rural, large/small*

2. **HEALTH ISSUES**
    a. What are the biggest health needs in the community that you live?
        i. *INSERT MAP exercise: Please use this map to help our team understand where communities that experience health burdens live?*
            1. Probe for:
                1. What specific geographic locations struggle with health issues the most?
                2. What specific groups of community members experience health issues the most?
3. **CHALLENGES/BARRIERS**
    a. What are the challenges (barriers) to being healthy for the community you live in?
        i. Probe for:
            1. Health Behaviors
            2. Social factors
            3. Economic factors
            4. Clinical Care factors
            5. Physical (Built) environment
4. **SOLUTIONS**
    a. What solutions do you think are needed to address the health needs and or challenges mentioned previously?
        i. Probe for:
            1. Health Behaviors
            2. Social factors
            3. Economic factors
            4. Clinical Care factors
            5. Physical (Built) environment
5. **PRIORITY: Based on what we have discussed so far, what are currently the most important or urgent top 3 health issues or challenges to address in order to improve the health of the community you live in?**
6. **RESOURCES**
    a. What resources exist in your community to help people live healthy lives?
        i. Probe for:
            1. Barriers to accessing these resources.
            2. New resources that have been created since 2016
            3. New partnerships/projects/funding

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

Primary Data Processing

Data were analyzed using NVivo 10 qualitative software. As needed, key informants were also asked to write data directly onto a HSA map for identification of vulnerable populations in the service area. Content analysis included thematic coding to potential health need categories, the identification of special populations experiencing health issues, and the identification of resources. In some instances, data were coded in accordance to the interview question guide. Results were aggregated to inform the determination of prioritized significant health needs.

Secondary Data Collection and Processing

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

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

CDPH Health-Outcome Data

Mortality and birth-related data for each ZIP Code within Del Norte County, as well as for Del Norte County overall, were collected from the California Department of Public Health (CDPH). Associated mortality indicators were also obtained at the county level for Curry County from the Oregon Health Authority[8] (OHA). The specific indicators used are listed in Table 11. To increase the stability of calculated rates for CDPH data, each of these indicators were collected for the years from 2012 to 2016. The specific processing steps used to derive these rates are described below.

Table 11: Mortality and Birth-Related Indicators Used in the CHNA

Indicator	ICD10 Codes	Obtained for:	
		Del Norte	Curry
Heart Disease Mortality	I00-I09, I11, I13, I20-I51	Yes	Yes
Malignant Neoplasms (Cancer) Mortality	C00-C97	Yes	Yes
Cerebrovascular Disease (Stroke) Mortality	I60-I69	Yes	Yes
Chronic Lower Respiratory Disease (CLD) Mortality	J40-J47	Yes	Yes
Alzheimer's Disease Mortality	G30	Yes	Yes
Unintentional Injuries (Accidents) Mortality	V01-X59, Y85-Y86	Yes	Yes
Diabetes Mellitus Mortality	E10-E14	Yes	Yes
Influenza and Pneumonia Mortality	J09-J18	Yes	Yes
Chronic Liver Disease and Cirrhosis Mortality	K70, K73, K74	Yes	No
Essential Hypertension and Hypertensive Renal Disease Mortality	I10, I13, I15	Yes	Yes
Intentional Self-Harm (Suicide) Mortality	U03, X60-X84, Y87.0 (U03 not included for Oregon)	Yes	Yes

[8] Oregon Health Authority. (2017). *2016 Vital Statistics Annual Report Vol. 2*. Retrieved September 3, 2018, from https://www.oregon.gov/oha/PH/BIRTHDEATHCERTIFICATES/VITALSTATISTICS/ANNUALREPORTS/VOLUME2/Pages/index.aspx

Nephritis, Nephrotic Syndrome, and Nephrosis (Kidney disease) Mortality	N00-N07, N17-N19, N25-N27	Yes	Yes
Total Births		Yes	No
Deaths of Those Under 1 Year		Yes	No

ZIP Code Definitions

All CDPH indicators used at this stage of the analysis are reported by patient mailing ZIP Codes. ZIP Codes are defined by the U.S. Postal Service as a single location (such as a PO Box), or a set of roads along which addresses are located. The roads that comprise such a ZIP Code may not form contiguous areas and do not match the areas used by the U.S. Census Bureau, which is the main source of population and demographic information in the United States. Instead of measuring the population along a collection of roads, the census reports population figures for distinct, largely contiguous areas. To support the analysis of ZIP Code data, the U.S. Census Bureau created 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, in combination with the health-outcome data reported at the ZIP Code level, make it possible to calculate rates for each ZCTA. However, the difference in the definition between mailing ZIP Codes and ZCTAs has two important implications for analyses of ZIP Code level data.

First, ZCTAs are approximate representations of ZIP Codes rather than exact matches. While this is not ideal, it is nevertheless the nature of the data being analyzed. Second, not all ZIP Codes have corresponding ZCTAs. Some PO Box ZIP Codes or other unique ZIP Codes (such as a ZIP Code assigned to a single facility) may not have enough addressees residing in a given census block to ever result in the creation of a 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[9] (as well as 97415 in Curry County) were compared to ZCTA boundaries.[10] These unique ZIP Codes were then assigned to either the ZCTA in which they fell or, in the case of rural areas that are not completely covered by ZCTAs, the ZCTA closest to them. The CDPH information associated with these PO Boxes or unique ZIP Codes were then added to the ZCTAs to which they were assigned.

For example, 95532 is a PO Box located in Crescent City, California. ZIP Code 95532 is not represented by a ZCTA, but it could have reported patient data. Through the process identified above, it was found that 95532 is located within the 95531 ZCTA. Data for both ZIP Codes 95532 and 95531 were therefore assigned to ZCTA 95531 and used to calculate rates. All ZIP Code level health-outcome variables given in this report are therefore reporting approximate rates for ZCTAs, but for the sake of familiarity of terms they are elsewhere presented as ZIP Code rates.

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

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

Rate Smoothing

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

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

The next step in the analysis process was to calculate rates for each of these indicators. However, rather than calculating raw rates, Empirical Bayes smoothed rates (EBRs) were created for all indicators possible.[11] Smoothed rates are considered preferable to raw rates for two main reasons. First, the small population of many ZCTAs, particularly those in rural areas, meant that the rates calculated for these areas would be unstable. This problem is sometimes referred to as the small-number problem. Empirical Bayes smoothing seeks to address this issue by adjusting the calculated rate for areas with small populations so that they more closely resemble the mean rate for the entire study area. The amount of this adjustment is greater in areas with smaller populations, and less in areas with larger populations.

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

EBRs were calculated for each mortality indicator using the total population figure reported for ZCTAs in the 2014 American Community Survey 5-year Estimates table DP05. Data for 2014 were used because this represented the central year of the 2012–2016 range of years for which CDPH data were collected.

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

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

[11] Anselin, L. (2003). *Rate Maps and Smoothing.* Retrieved January 14, 2018 from http://www.dpi.inpe.br/gilberto/tutorials/software/geoda/tutorials/w6_rates_slides.pdf

Community Health Vulnerability Index (CHVI)

The CHVI is a health-care-disparity index largely based on the Community Need Index (CNI) developed by Barsi and Roth.[12] The CHVI uses the same basic set of demographic indicators to address healthcare disparities as outlined in the CNI, but these indicators are aggregated in a different manner to create the CHVI. For this report, the nine indicators were obtained from the 2016 American Community Survey 5-year Estimate dataset at the census tract[13] level and are contained in Table 12.

Table 12: Indicators Used to Create the Community Health Vulnerability Index

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

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

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

Indicator	Description	Source Data Table	Variables Included
Renters	Percentage of the population in renter-occupied housing units	B25008	HD01_VD01, HD01_VD03
Uninsured	Percentage of population that is uninsured	S2701	HC05_EST_VC01

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

Significant Health Need Identification Dataset

The third set of secondary data used in the analysis were the health-factor and health-outcome indicators used to identify the significant health needs. The selection of these indicators was guided by the previously identified conceptual model. Table 13 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 13: Health-Factor and Health-Outcome Data Used in CHNA, Including Data Source and Time Period in Which the Data Were Collected

Conceptual Model Alignment			Indicator	Data Source	Time Period
Health Outcomes	Length of Life	Mortality	Alzheimer's Disease Mortality	CDPH*/OHA**	2012-2016
			Premature Age-Adjusted mortality	CHR***	2014-2016
			Premature Death (Years of Potential Life Lost)	CHR	2014-2016
			Cerebrovascular Disease (Stroke)	CDPH/OHA	2012-2016
			Chronic Lower Respiratory Disease	CDPH/OHA	2012-2016
			Diabetes Mellitus	CDPH/OHA	2012-2016
			Diseases of the Heart	CDPH/OHA	2012-2016
			Essential Hypertension & Hypertensive Renal Disease	CDPH/OHA	2012-2016
			Influenza and Pneumonia	CDPH/OHA	2012-2016
			Intentional Self-Harm (Suicide)	CDPH/OHA	2012-2016
			Liver Disease	CDPH	2012-2016
			Malignant Neoplasms (Cancer)	CDPH/OHA	2012-2016
			Nephritis, Nephrotic Syndrome and Nephrosis (Kidney Disease)	CDPH/OHA	2012-2016
			Unintentional Injuries (Accidents)	CDPH/OHA	2012-2016
	Quality of Life	Morbidity	Breast Cancer Incidence	California Cancer Registry/ National Cancer Institute	2010-2014
			Colorectal Cancer Incidence	California Cancer Registry/ National Cancer Institute	2010-2014

			Diabetes Prevalence	CHR	2014
			Disability	Census	2016
			HIV Prevalence Rate	CHR	2015
			Low Birth Weight	CHR	2010-2016
			Lung Cancer Incidence	California Cancer Registry/ National Cancer Institute	2010-2014
			Prostate Cancer Incidence	California Cancer Registry/ National Cancer Institute	2010-2014
			Poor Mental Health Days	CHR	2016
			Poor Physical Health Days	CHR	2016
Health Factors	Health Behavior	Alcohol and Drug Use	Excessive Drinking	CHR	2016
			Drug Overdose Deaths	CDPH	2014-2016
		Diet and Exercise	Adult Obesity	CHR	2014
			Physical Inactivity	CHR	2014
			Limited Access to Healthy Foods	CHR	2015
			Modified Retail Food Environment Index (mRFEI)	Census	2016
			Access to Exercise Opportunities	CHR	2010 population/ 2016 facilities
		Sexual Activity	Sexually Transmitted Infections (Chlamydia Rate)	CHR	2015
			Teen Birth Rate	CHR	2010-2016
		Tobacco Use	Adult Smoking	CHR	2016
	Clinical Care	Access to Care	Healthcare Costs	CHR	2015
			Health Professional Shortage Area - Dental	HRSA†	2018
			Health Professional Shortage Area - Mental Health	HRSA	2018
			Heath Professional Shortage Area - Primary Care	HRSA	2018
			Medically Underserved Areas	HRSA	2018
			Mammography Screening	CHR	2014
			Dentists	CHR	2016
			Mental Health Providers	CHR	2017
			Psychiatrists	HRSA	
			Specialty Care Providers	HRSA	
			Primary Care Physicians	CHR	2015
		Quality Care	Preventable Hospital Stays (Ambulatory Care Sensitive Conditions)	CHR	2015
	Soci al & Eco	Community safety	Homicide Rate	CHR	2010-2016
			Violent Crime Rate	CHR	2012-2014

			Motor Vehicle Crash Death Rate	CHR	2010-2016
		Education	Some College (Post-Secondary Education)	CHR	2012-2016
			High School Graduation	CHR	2014-2015
		Employment	Unemployment	CHR	2016
		Family and Social Support	Children in Single-Parent Households	CHR	2012-2016
			Social Associations	CHR	2015
		Income	Children Eligible for Free and Reduced Lunch	CHR	2015-2016
			Children in Poverty	CHR	2016
			Median Household Income	CHR	2016
			Uninsured	CHR	2015
	Physical Environment	Housing and Transit	Severe Housing Problems	CHR	2010-2014
			Households with No Vehicle	Census	2012-2016
			Access to Public Transit	Census/ GTSF data	2010,2012-2016,2018
		Air and Water Quality	Pollution Burden Score	Cal-EnviroScreen	2017
			Air Pollution - Particulate Matter	CHR	2012
			Drinking Water Violations	CHR	2016

* California Department of Public Health
** Oregon Health Authority
*** County Health Rankings
† Health Resources and Services Administration

County Health Rankings Data

All indicators listed with County Health Rankings (CHR) as their source were obtained from the 2018 County Health Rankings[14] dataset. This was the most common source of data, with 38 associated indicators included in the analysis. Indicators were collected at both the county and state levels. County-level indicators were used to represent the health factors and health outcomes in the 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 14.

Table 14: County Health Rankings Dataset, Including Indicators, the Time Period the Data Were Collected, and the Original Source of the Data

CHR Indicator	Time Period	Original Data Provider
Premature Death (Years of Potential Life Lost)	2014–2016	National Center for Health Statistics - Mortality Files
Diabetes Prevalence	2014	CDC Diabetes Interactive Atlas
HIV Prevalence Rate	2015	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Low Birth Weight	2010–2016	National Center for Health Statistics - Natality Files

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

Poor Mental Health Days	2016	Behavioral Risk Factor Surveillance System
Poor Physical Health Days	2016	Behavioral Risk Factor Surveillance System
Excessive Drinking	2016	Behavioral Risk Factor Surveillance System
Adult Obesity	2014	CDC Diabetes Interactive Atlas
Physical Inactivity	2014	CDC Diabetes Interactive Atlas
Limited Access to Healthy Foods	2015	USDA Food Environment Atlas
Access to Exercise Opportunities	2010 population/ 2016 facilities	Business Analyst, Delorme Map Data, ESRI, & U.S. Census Tiger Line Files
Sexually Transmitted Infections (Chlamydia Rate)	2015	National Center for HIV/AIDS, Viral Hepatitis, STD, and TB Prevention
Teen Birth Rate	2010–2016	National Center for Health Statistics - Natality Files
Adult Smoking	2016	Behavioral Risk Factor Surveillance System
Healthcare Costs	2015	Dartmouth Atlas of Healthcare
Mammography Screening	2014	Dartmouth Atlas of Healthcare
Dentists	2016	Area Health Resource File/National Provider Identification File
Mental Health Providers	2017	CMS, National Provider Identification
Primary Care Physicians	2015	Area Health Resource File/American Medical Association
Preventable Hospital Stays (Ambulatory Care Sensitive Conditions)	2015	Dartmouth Atlas of Healthcare
Homicide Rate	2010–2016	CDC WONDER Mortality Data
Violent Crime Rate	2012–2014	Uniform Crime Reporting - FBI
Motor Vehicle Crash Death Rate	2010–2016	CDC WONDER Mortality Data
Some College (Postsecondary Education)	2012–2016	American Community Survey, 5-Year Estimates
High School Graduation	2014–2015	California Department of Education
Unemployment	2016	Bureau of Labor Statistics Local Area Unemployment Statistics
Children in Single-Parent Households	2012–2016	ACS 5-Year Estimates
Social Associations	2015	County Business Patterns
Children Eligible for Free Lunch	2015–2016	National Center for Education Statistics
Children in Poverty	2016	U.S. Census Bureau Small Area Income and Poverty Estimates
Median Household Income	2016	U.S. Census Bureau Small Area Income and Poverty Estimates
Uninsured	2015	U.S. Census Bureau Small Area Health Insurance Estimates
Severe Housing Problems	2010–2014	HUD Comprehensive Housing Affordability Strategy (CHAS) Data
Air Pollution - Particulate Matter	2012	CDC's National Environmental Public Health Tracking Network
Drinking Water Violations	2016	Safe Drinking Water Information System

CDPH/OHA Data

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

Drug overdose death rates were also obtained from CDPH. This indicator reports age-adjusted drug-induced death rates for counties and the state from 2014 to 2016 as reported in the 2018 County Health Status Profiles.[15]

HRSA Data

Indicators related to the availability of healthcare providers were obtained from the Health Resources and Services Administration[16] (HRSA). These included Dental, Mental Health, and Primary Care Health Professional Shortage Areas and Medically Underserved Areas/Populations. They also included the number of specialty care providers and psychiatrists per 100,000 residents, derived from the county-level Area Health Resource Files.

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

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

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[15] California Department of Public Health. (2018). *County Health Status Profiles 2018*. Retrieved October 23, 2018 from https://www.cdph.ca.gov/Programs/CHSI/Pages/County-Health-Status-Profiles.aspx

[16] Health Resources and Services Administration. (2018). *Data Downloads*. Retrieved June 19 and August 1, 2018 from https://data.hrsa.gov/data/download

California Cancer Registry/National Cancer Institute Data

Data obtained from the California Cancer Registry[17] includes age-adjusted incidence rates for colon and rectum, female breast, lung and bronchus, and prostate cancer sites for counties and the state. Reported rates were based on data from 2010 to 2014, and report cases per 100,000. For low-population counties, rates were calculated for a group of counties rather than for individual counties. That group rate was used in this report to represent incidence rates for each individual county in the group. Comparable cancer rates for Oregon were obtained from the National Cancer Institute[18].

Census Data

Data from the U.S. Census Bureau were used to calculate three additional indicators: the percentage of households with no vehicle available, the percentage of the civilian noninstitutionalized population with some disability, and the Modified Retail Food Environment Index (mRFEI). The sources for the indicators used are given in Table 15.

Table 15: Detailed Description of Data Used to Calculate Percentage of Population with Disabilities, Households without a Vehicle, and the mRFEI

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

The mRFEI indicator reports the percentage of the total food outlets in a ZCTA that are considered healthy food outlets. The mRFEI indicator was calculated using a modification of the methods described by the National Center for Chronic Disease Prevention and Health Promotion[19] using data obtained from the U.S. Census Bureau's 2016 County Business Pattern datasets.

[17] California Cancer Registry. (2018). *Age-Adjusted Invasive Cancer Incidence Rates in California*. Retrieved May 11, 2018 from https://www.cancer-rates.info/ca/

[18] National Cancer Institute. (2018). *State Cancer Profiles, Quick Profiles: Oregon*. Retrieved July 10, 2018 from https://statecancerprofiles.cancer.gov/quick-profiles/index.php?statename=oregon

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

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

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

CalEnviroScreen Data

CalEnviroScreen[20] is a dataset produced by CalEPA. It includes multiple indicators associated with various forms of pollution for census tracts within the state. These include multiple measures of air and water pollution, pesticides, toxic releases, traffic density, cleanup sites, groundwater threats, hazardous waste, solid waste, and impaired bodies of water. One indicator, pollution burden, combines all of these measures to generate an overall index of pollution for each tract. To generate a county-level pollution-burden measure, the percentage of the population residing in census tracts with pollution-burden scores greater than or equal to the 50th percentile was calculated for each county as well as for the state.

Google Transit Feed Specification (GTFS) Data

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

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

Table 16 notes the agencies for which transit stops could be obtained. It should be noted that while every attempt was made to include as comprehensive a list of data sources as possible, there may be transit stops associated with agencies not included in this list in the county. Caution should therefore be used in interpreting this indicator.

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

Table 16: Transportation Agencies Used to Compile the Proximity to Public Transportation Indicator

County	Agency
Curry County	Curry Public Transit
Del Norte County	Redwood Coast Transit (SouthWest POINT is an oregon bus line that extends into Del Norte and Curry Counties)

Descriptive Socioeconomic and Demographic Data

The final secondary dataset used in this analysis was comprised of multiple socioeconomic and demographic indicators collected at the ZCTA, county, and state level. These data were not used in an analytical context. Rather, they were used to provide a description of the overall population characteristics within the county. Table 17 lists each of these indicators as well as their sources.

Table 17: Descriptive Socioeconomic and Demographic Data Descriptions

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

Detailed Analytical Methodology

The collected and processed primary and secondary data were integrated in three main analytical stages. First, area-wide key informant interviews were conducted to help identify geographic locations and subpopulations within the HSA experiencing 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 was combined with secondary health need identification data to identify significant health needs within the service area. Finally, primary data was used to prioritize those identified significant health needs. The specific details for these analytical steps are given in the following three sections.

Identifying Areas and Subpopulations with Disproportionate Health Burdens

Geographic areas and subpopulations experience disproportionate health burdens were identified based on initial area-wide key informant interviews. Areas or subpopulations were noted if they were consistently or strongly identified by these area-wide primary data sources. Subsequent focus groups were then organized with the aim of including the input of members of these communities.

Significant Health Need Identification

The general methods through which significant health needs (SHNs) were identified are shown in Figure 18 and described here in greater detail. The first step in this process was to identify a set of potential health needs (PHNs) from which significant health needs could be selected. This was done by reviewing the health needs identified during the 2016 CHNA among various hospitals throughout northern California and then supplementing this list based on a preliminary analysis of the primary qualitative data collected for the 2019 CHNA. This resulted in a list of 10 PHNs shown in Table 18.

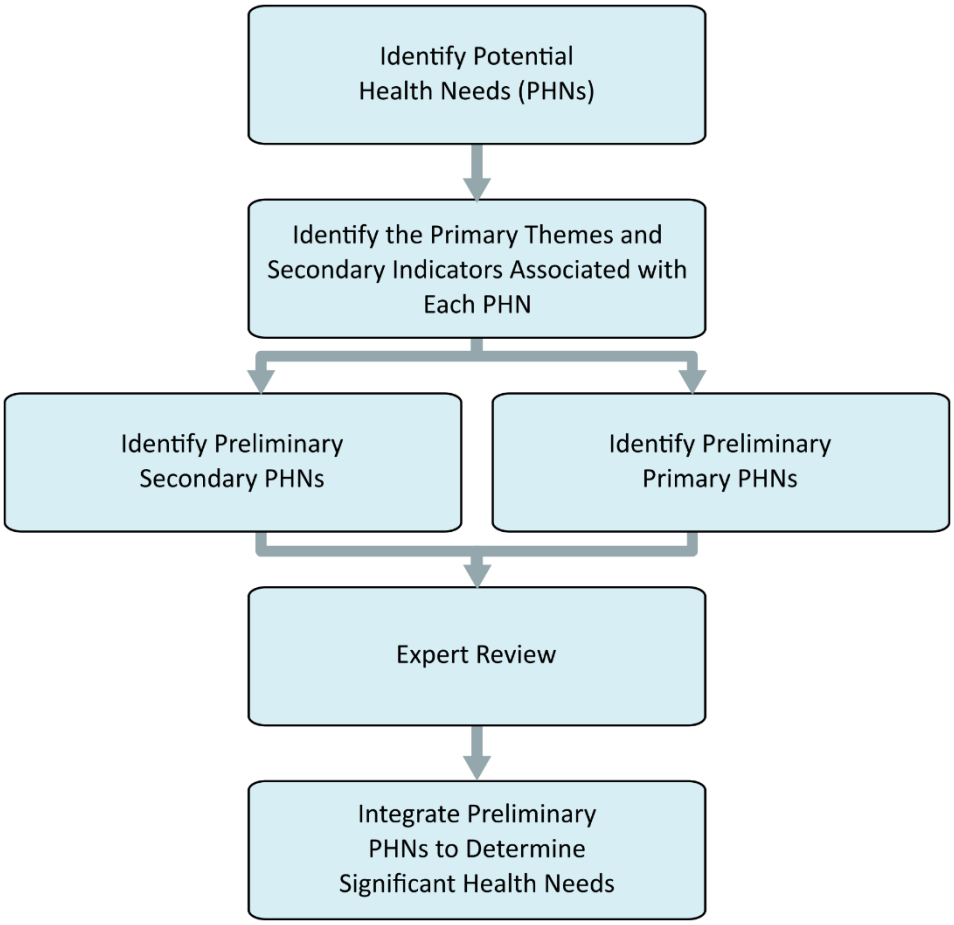

Figure 18: Process followed to identify Significant Health Needs

Table 18: Potential Health Needs

2019 Potential Health Needs (PHNs)

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

The next step in the process was to identify primary themes and secondary indicators associated with each of these health needs as shown in Table 19. Primary theme associations were used to guide coding of the primary data sources to specific PHNs.

Table 19: Primary Theme and Secondary Indicators Used to Identify Significant Health Needs

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
PHN1	Access to Mental/ Behavioral/ Substance Abuse Services	• Liver Disease Mortality • Suicide Mortality • Poor Mental Health Days • Poor Physical Health Days • Drug Overdose Deaths • Excessive Drinking • Health Professional Shortage Area – Mental Health • Mental Health Providers • Psychiatrists • Social Associations	• Self-Injury • Mental Health and Coping Issues • Substance Abuse • Smoking • Stress • Mentally Ill and Homeless • PTSD • Access to Psychiatrist • Homelessness
PHN2	Access to Quality Primary Care Health Services	• Cancer Mortality • Chronic Lower Respiratory Disease Mortality • Diabetes Mortality • Heart Disease Mortality • Hypertension Mortality • Influenza and Pneumonia Mortality • Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality • Breast Cancer Incidence • Colorectal Cancer Incidence • Diabetes Prevalence • Low Birth Weight • Lung Cancer Incidence • Prostate Cancer Incidence • Healthcare Costs	• Issue of Quality of Care • Access to Care • Health Insurance • Care for Cancer/Cancer Occurrence • Indicators in PQI: Diabetes, COPD, CRLD, HTN, HTD, Asthma, Pneumonia

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
		• Health Professional Shortage Area – Primary Care • Medically Underserved Areas • Mammography Screening • Primary Care Physicians • Preventable Hospital Stays • Percentage Uninsured	
PHN3	Active Living and Healthy Eating	• Cancer Mortality • Diabetes Mortality • Heart Disease Mortality • Hypertension Mortality • Kidney Disease Mortality • Stroke Mortality • Breast Cancer Incidence • Colorectal Cancer Incidence • Diabetes Prevalence • Prostate Cancer Incidence • Limited Access to Healthy Foods • mRFEI • Access to Exercise Opportunities • Physical Inactivity • Adult Obesity	• Food Access/Insecurity • Community Gardens • Fresh Fruits and Veggies • Distance to Grocery Stores • Food Swamps • Chronic Disease Outcomes Related to Poor Eating • Diabetes, HTD, HTN, Stroke, Kidney issues, Cancer • Access to Parks • Places to be Active
PHN4	Safe and Violence-Free Environment	• Poor Mental Health Days • Homicide Rate • Motor Vehicle Crash Death Rate • Violent Crime Rate • Social Associations	• Crime Rates • Violence in The Community • Feeling Unsafe in The Community • Substance Abuse-Alcohol and Drugs • Access to Safe Parks • Pedestrian Safety • Safe Streets • Safe Places to Be Active
PHN5	Access to Dental Care and Preventive Services	• Dentists • Health Professional Shortage Area – Dental	• Any Issues Related to Dental Health • Access to Dental Care
PHN6	Pollution-Free Living Environment	• Cancer Mortality • Chronic Lower Respiratory Disease Mortality • Breast Cancer Incidence • Colorectal Cancer Incidence • Lung Cancer Incidence • Prostate Cancer Incidence • Adult Smoking • Air Pollution – Particulate Matter • Drinking Water Violations • Pollution Burden	• Smoking • Unhealthy Air, Water, Housing • Health Issues: Asthma, COPD, CLRD, Lung Cancer

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
PHN7	Access to Basic Needs Such as Housing, Jobs, and Food	• Premature Age-Adjusted Mortality • Premature Death (Years of Potential Life Lost) • Low Birth Weight • Medically Underserved Areas • Healthcare Costs • High School Graduation • Some College (Postsecondary Education) • Unemployment • Children in Single-Parent Household • Social Associations • Children Eligible for Free or Reduced Lunch • Children in Poverty • Median Household Income • Uninsured • Severe Housing Problems • Households with No Vehicle • mRFEI • Limited Access to Healthy Food	• Employment and Unemployment • Poverty • Housing Issues • Homelessness • Education Access • Community Quality of Life • Housing Availability • Housing Affordability
PHN8	Access and Functional Needs	• Access to Public Transportation • Households with no Vehicle • Percentage of Population with a Disability	• Physical Access Issues • Cost of Transportation • Ease of Transportation Access • No Car • Disability
PHN9	Access to Specialty and Extended Care	• Alzheimer's Mortality • Cancer Mortality • Chronic Lower Respiratory Disease Mortality • Diabetes Mortality • Heart Disease Mortality • Hypertension Mortality • Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality • Diabetes Prevalence • Lung Cancer Incidence • Psychiatrists • Specialty Care Providers • Preventable Hospital Stays	• Seeing a Specialist for Health Conditions • Diabetes-Related Specialty Care • Specialty Care for HTD, HTN, Stroke, Kidney Diseases
PHN10	Injury and Disease Prevention and Management	• Alzheimer's Mortality • Chronic Lower Respiratory Disease Mortality • Diabetes Mortality • Heart Disease Mortality • Hypertension Mortality • Influenza and Pneumonia Mortality	• Anything Related to Helping Prevent a Preventable Disease or Injury • Unintentional Injury • Smoking and Alcohol/Drug Abuse • Teen Pregnancy • HIV/STD

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators
		• Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality • Suicide Mortality • Unintentional Injury Mortality • Diabetes Prevalence • HIV Prevalence Rate • Low Birth Weight • Drug Overdose Deaths • Excessive Drinking • Adult Obesity • Physical Inactivity • Sexually Transmitted Infections • Teen Birth Rate • Adult Smoking • Motor Vehicle Crash Death Rate	• TB • Influenza and Pneumonia • Health Classes • Health Promotion Teams and Interventions • Need for Health Literacy

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

Table 20: Benchmark Comparisons to Show Indicator Performance

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

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

Hypertension Mortality	Higher
Influenza and Pneumonia Mortality	Higher
Kidney Disease Mortality	Higher
Liver Disease Mortality	Higher
Pollution Burden	Higher
Public Transit Proximity	Lower
Percentage with Disability	Higher

Once these poorly performing quantitative indicators were identified, they were used to identify preliminary secondary significant health needs. This was done by calculating the percentage of all secondary indicators associated with a given PHN that were identified as performing poorly within the 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 20%, 25%, 33%, 40%, 50%, 60%, 66%, 75%, or 80% of the associated indicators were found to perform poorly. These thresholds were chosen because they correspond to divisions of the indicators into fifths, quarters, thirds, or halves. A similar set of standards was used to identify the preliminary interview and focus-group health needs: any of the survey respondents mentioned a theme associated with a PHN, or if at least 20%, 25%, 33%, 40%, 50%, 60%, 66%, 75%, or 80% of the respondents mentioned an associated theme.

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

For this report, A PHN was selected as a significant health need if 60% of the associated quantitative indicators were identified as performing poorly or the need was identified by 60% or more of the primary sources as performing poorly.

Health Need Prioritization

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

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

community was calculated. Since primary data sources were asked to prioritize health needs in this question, this number was taken to represent the intensity of the need.

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

Detailed List of Resources to Address Health Needs

Table 21: Detailed List of Resources Potentially Available to Address Significant Health Needs Identified in the CHNA

Organization Information			Potential Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/behavioral/sub	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violent free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs, such as food, housing, jobs	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
Adult and Family Counseling Center	95531	www.manta.com/c/mmgjlqp/adult-family-counseling-center	X									
Brookings Harbor Food Bank	97415	http://brookingsharborfoodbank.org/			X				X			
Brookings Harbor Medical Center	97415	http://bhmc-oak.com/		X								
Brookings Presbyterian Church	97415	www.brookingspres.com/							X			
Brookings Psychiatry	97415	(541) 412-2099	X									
Brookings Seventh Day Adventist	97415	www.brookingssda.org/							X			
Cal-Ore Life Flight	97415	www.cal-ore.com								X	X	
Chetco Activity Center	97415	https://chetcoac.org/			X				X			X
Chetco Medical Center	97415	www.chetcomedical.com/#compehensive-care		X							X	
Coastal Connections	95531	http://www.co.del-norte.ca.us/departments/health-human-services/public-health/public-health-programs/preventionprograms/coastalconnections-1							X			X
Community Assistance Network	95531	(707) 464-9190							X			
County of Del Norte Child Welfare Services	95531	http://www.co.del-norte.ca.us/departments/health-human-services/social-services-branch/child-welfare-services-cws				X						
County of Del Norte Veterans Services	95531	www.co.del-norte.ca.us/departments/veterans-services	X	X	X		X		X			
Court Appointed Special Advocates (CASA)	95531	www.casadn.org/				X						
Crescent City Housing Authority	95531	http://www.crescentcity.org/housing.html							X			
Curry Health Foundation	97444	www.curryhealthfoundation.com	X	X			X				X	X
Curry Medical Center	97415	http://www.curryhealthnetwork.com/getpage.php?n		X			X				X	

Organization Information			Potential Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/behavioral/sub	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violent free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs, such as food, housing, jobs	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
		ame=index										
Curry Public Transit Dial a Ride	97415	www.currypublictransit.org								X		
Del Norte Ambulance/Custom Air Service	95531	www.delnorteambulance.com/	X	X						X		
Del Norte and Adjacent Tribal Lands Building Healthy Communities Initiative	95531	www.calendow.org/places/del-norte-and-adjacent-tribal-land/	X	X	X	X	X		X	X		X
Del Norte Childcare Council	95531	www.dnccc.com/				X			X		X	X
Del Norte Community Health Center / Open Door Clinic	95531	http://opendoorhealth.com/opendoor/locations/del-norte-community-health-center/	X	X			X				x	
Del Norte Community Wellness Center and Garden	95531	http://opendoorhealth.com/opendoor/services/community-wellness-gardens/			X				X			
Del Norte County Alcohol and other Drug Services	95531	http://www.co.del-norte.ca.us/departments/health-human-services/aod	X									X
Del Norte County Health & Human Services Public Assistance	95531	http://www.co.del-norte.ca.us/departments/health-human-services	X						X			
Del Norte County Library	95531	http://www.delnortecountylibrary.org/										X
Del Norte County Mental Health Branch (division of HHS)	95531	www.co.del-norte.ca.us/departments/health-human-services/mental-health-branch	X									
Del Norte County Public Health Branch (division of HHS)	95531	http://www.co.del-norte.ca.us/departments/health-human-services/public-health/public-health-programs	X	X	X	X	X					X
Del Norte County Social Services Branch (division of HHS)	95531	http://www.co.del-norte.ca.us/departments/health-human-services/social-services-branch				X			X		X	
Del Norte Family Resource Center of the Redwoods	95531	(707) 464-0955			X				X			X
Del Norte Mobile Dental Van	95531	www.opendoorhealth.com/opendoor/?page_id=900					X					

Organization Information			Potential Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/behavioral/sub	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violent free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs, such as food, housing, jobs	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
Del Norte Senior Center	95531	www.delnorteseniorcenter.org/senior-services.html			X				X			X
Family Resource Center of the Redwoods	95531	707-464-0955							X			
First 5 Del Norte	95531	www.delnortekids.org/	X	X	X	X	X	X	X	X	X	X
Fred Endert Municipal Pool	95531	http://crescentcity.org/pool.html				X						
Habitat for Humanity	95531	http://www.delnortehabitat.org							X			
Harrington House Shelter	95531	www.ruralhumanservices.org/harrington-house/				X						X
Health Insurance Counseling & Advocacy Program	95531	www.needymeds.org/local_programs.taf?_function=detail&local_pid=2976	X	X			X				X	
Howonquet Early Learning Program	95567	www.tolowa-nsn.gov/tribal-enterprises/howonquet-day-care/										X
Humboldt Addiction Services Program (HASP)	95531	(707) 464-7849	X									
North Coast Rape Crisis Team	95531	www.ncrct.org/				X						
Our Daily Bread Ministries	95531	www.dailybreadcc.org			X				X			
Partnership HealthPlan of California	95531	http://www.partnershiphp.org/Community/Pages/Del-Norte-County.aspx	X	X	X	X	X		X	X	X	X
Redwood Coast Regional Center	95531	http://redwoodcoastrc.org/	X	X			X			X	X	X
Redwoods Happiness Initiative	95531	https://www.facebook.com/redwoodsinitiative/						X				
Resolution Care	95501	http://www.resolutioncare.com/									X	
Rural Human Services	95531	www.ruralhumanservices.org/			X	X			X			X
Smith River Howonquet Senior Nutrition Program	95567	(707) 487-0215 Ext. 3							X			

Organization Information			Potential Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/behavioral/sub	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violent free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs, such as food, housing, jobs	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
Smith River Methodist Church	95567	www.cnumc.org/ministries	X						X			
Star of the Sea Catholic Church	97415	www.staroftheseа-catholicchurch.org/home.html							X			
St. Timothy's Episcopal Church	97415	www.sttimothyepiscopal.org/							X			
Sutter Coast Community Clinic	95531	https://www.sutterhealth.org/coast/find-location/facility/sutter-coast-community-clinic		X								
Sutter Coast Health Center at Brookings-Harbor	97415	www.suttercoast.org/locations/brookings-harbor/		X							X	
Sutter Coast Hospital	95531	www.suttercoast.org/	X	X							X	X
Sutter Coast Home Health and Hospice Care	95531	https://www.sutterhealth.org/coast/services/home-health-hospice									X	
Sutter Coast Walk-In Clinic	95531	https://www.sutterhealth.org/coast/find-location/facility/sutter-coast-walk-in-clinic		X			X					
The Pregnancy Care Center of Crescent City	95531	https://optionsforpregnancy.com/free-clinic/the-pregnancy-care-center-of-crescent-city/									X	X
Tolowa Dee-ni' Nation	95567	https://www.tolowa-nsn.gov/departments/cfs/	X	X		X	X		X	X	X	X
Trinity Lutheran Church	97415	www.brookingslutheran.org/outreach.html							X			
24 Hour Abuse Hotline	Throughout Del Norte County	http://www.co.del-norte.ca.us/departments/health-human-services/report-abuse				X						
United Indian Health Services	Throughout Del Norte County	www.unitedindianhealthservices.org/	X	X	X		X		X	X		X
Wild Rivers Community Foundation	95531	www.hafoundation.org/Affiliates-Region/Wild-Rivers-Community-Foundation	X	X	X				X			X
Yurok Tribal programs	95548	http://www.yuroktribe.org/departments/socialservices/MonthlyAssistance.htm	X		X	X	X		X		X	X

Limits and Information Gaps

Study limitations included challenges obtaining secondary quantitative data and assuring community representation via primary qualitative data collection. For example, most of the 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.

As always with primary data collection, gaining access to participants that best represent the populations needed for this assessment is a challenge. Additionally, data collection of health resources in the HSA was challenging; though an effort was made to verify all resources (assets) collected in the 2016 CHNA via web search, we recognize that ultimately some resources may not be listed that exist in the HSA.