Dignity Health
Woodland Healthcare

Woodland Memorial Hospital

2019 Community Health Needs Assessment – Data and Technical Section

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Community Health Insights (www.communityhealthinsights.com) conducted the work on behalf of the partners. 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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COMMUNITY HEALTH INSIGHTS

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CHNA Main Report can be found online at https://www.dignityhealth.org/sacramento/about-us/community-health-and-outreach/health-needs-assessment.

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Yolo County 2019 CHNA/CHA Data/Technical Section

The following section presents a detailed account of data collection, analysis, and results, as well as appendices to the CHNA/CHA report for Yolo County. The main report can be found online at *https://www.dignityhealth.org/sacramento/about-us/community-health-and-outreach/health-needs-assessment*.

Results of Data Analysis for Yolo County

Secondary Data

The tables and figures that follow show the specific values for the health need indicators used as part of the health need identification process. *(NOTE: References for tables 1-6 and figures 1-6 are contained in Table 12.) Each* indicator value for Yolo County was compared to the California state benchmark. Indicators where performance was worse in the county versus the state are highlighted. Table 7 gives the values for survey questions used in health need identification, with relevant benchmarks. Questions with responses indicating issues in benchmark comparison are in orange.

Length of Life

Table 1: Length of Life Indicators Compared to State Benchmarks

Indicators	**Description**	**Yolo**	**California**
Infant Mortality	Infant deaths per 1,000 live births	4.1	4.5
Preterm Birth	Percent of births Preterm (<37 weeks)	9.5	20.2
Child Mortality	Deaths among children under age 18 per 100,000	38.0	38.5
Overall			
Life Expectancy	Life expectancy at birth in years	80.6	80.8
Age-Adjusted Mortality	Age-adjusted deaths per 100,000	649.1	608.5
Premature Age-Adjusted Mortality	Age-adjusted deaths among residents under age 75 per 100,000	273.9	268.8
Years of Potential Life Lost	Age-adjusted years of potential life lost before age 75 per 100,000	5,383.6	5,217.3
Cancer, Liver, and Kidney Disease			
Liver Disease Mortality	Deaths per 100,000	14.1	13.2
Cancer Mortality	Deaths per 100,000	141.2	153.4
Kidney Disease Mortality	Deaths per 100,000	3.7	8.3
Other			
Alzheimer's Mortality	Deaths per 100,000	38.9	35.0
Influenza Pneumonia Mortality	Deaths per 100,000	13.5	16.0
Chronic Disease			
Stroke Mortality	Deaths per 100,000	35.0	37.5
CLD Mortality	Deaths per 100,000	40.5	34.9
Diabetes Mortality	Deaths per 100,000	22.4	22.1
Heart Disease Mortality	Deaths per 100,000	127.8	157.3
Hypertension Mortality	Deaths per 100,000	11.8	12.6
Intentional and Unintentional Injuries			
Suicide Mortality	Deaths per 100,000	10.6	10.8

Unintentional Injury Mortality	Deaths per 100,000	35.4	31.2

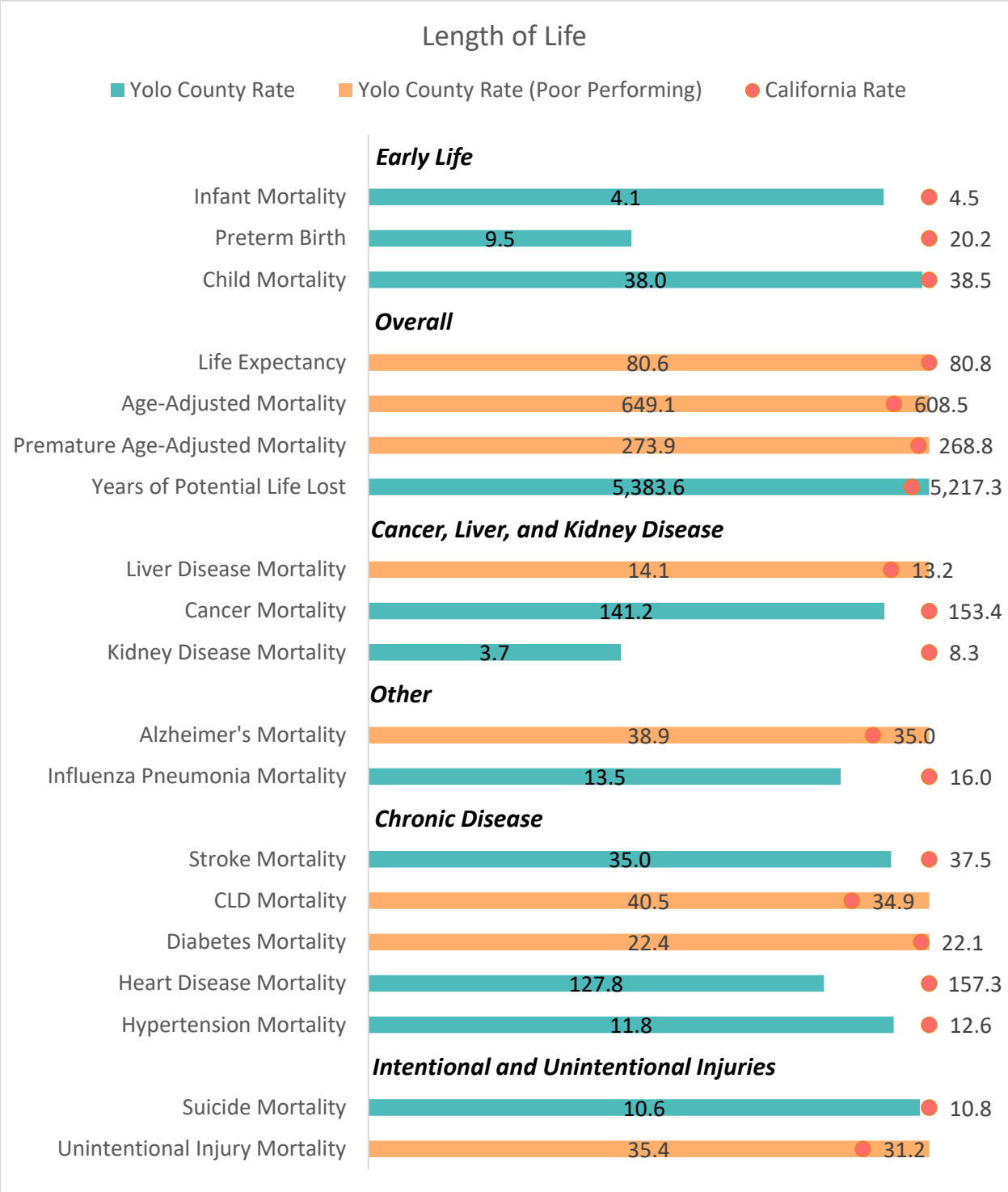

Figure 1: Length of life indicators

Quality of Life

Table 2: Quality of Life Indicator Compared to State Benchmarks

Indicators	Description	Yolo	California
Chronic Disease			
ED Asthma	Percentage population reporting ED or urgent care visits for asthma in the past 12 months	0.8%	12.7%
Hospitalizations for Diabetes Long Term Complications	Age-sex-adjusted hospitalization rate for long-term complications due to diabetes per 100,000	49.4	79.8
Percentage with Disability	Percentage of total civilian noninstitutionalized population with a disability	10.1%	10.6%
Diabetes Prevalence	Percentage age 20 and older with diagnosed diabetes	6.9%	8.5%
HIV Prevalence	Persons age 13 or older with a(n) Human Immunodeficiency Virus (HIV) infection per 100,000	121.5	376.4
Low Birth Weight	Percent of live births with birthweight below 2500 grams	5.8	6.8
Mental Health			
Hospitalizations for Mental Health or Substance Abuse	Hospitalizations for mental health or alcohol- or drug-related diagnoses per 100,000	612.3	676.1
Hospitalizations for Self-Inflicted Injuries Youth	Non-fatal hospitalizations for self-inflicted injury for persons aged 15-14 per 100,000	41.5	25.3
Hospitalizations for Mental Health Young Adults	Hospitalizations for Mental Health (MDC 19) for persons aged 15-24 per 100,000	694.1	908.6
Poor Mental Health Days	Age-adjusted average number of mentally unhealthy days reported in past 30 days	3.8	3.5
Poor Physical Health Days	Age-adjusted average number of physically unhealthy days reported in past 30 days	3.7	3.5
Cancer			
Cancer Female Breast	Age-adjusted incidence per 100,000	128.8	120.6
Cancer Colon and Rectum	Age-adjusted incidence per 100,000	33.1	37.1
Cancer Lung and Bronchus	Age-adjusted incidence per 100,000	43.3	44.6
Cancer Prostate	Age-adjusted incidence per 100,000	96.5	109.2
Cancer Liver	Age-adjusted incidence per 100,000	13.7	9.4
Cancer Colon Hospitalizations	Hospitalizations for with colon cancer as the primary diagnosis per 100,000	18.4	23.1
Falls			
ED Falls Aged 65+	Emergency department visits for persons age 65 or older for accidental falls per 100,000	5,125.8	4,276.9
Hospitalizations for Falls Aged 65+	Hospitalizations for persons age 65 or older for accidental falls per 100,000	1,270.8	1,496.0
Dental Health			
ED Visits for Dental Diagnosis Child	ED visits for persons under age 18 with dental problems as primary diagnosis per 100,000	219.9	441.0
ED Visits for Dental Diagnosis Adult	ED visits for persons aged 18 and older with dental problems as the primary diagnosis per 100,000	321.2	441.0

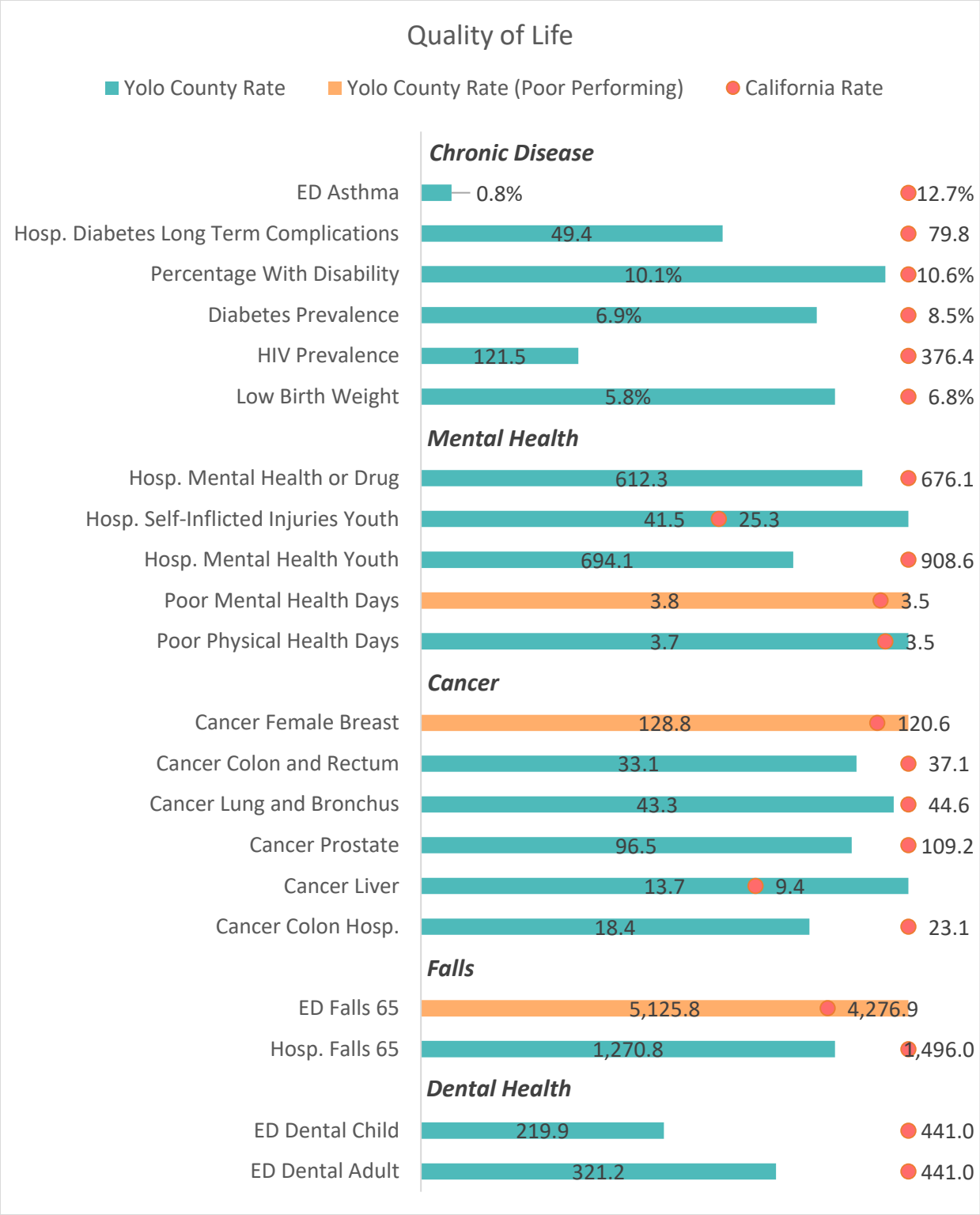

Figure 2: Quality of life indicators

Health Behaviors

Table 3: Health Behaviors Indicators Compared to State Benchmarks

Indicators	Description	Yolo	California
Excessive Drinking	Percentage of adults reporting binge or heavy drinking	19.5%	17.8%
Drug Overdose Deaths	Age-adjusted deaths per 100,000	15.1	12.2
Adult Obesity	Percentage of adults reporting BMI of 30 or more	22.9%	22.7%
Breastfeeding Rate	Percentage of infants exclusively breast fed in hospital	84.2%	69.6%
Physical Inactivity	Percentage age 20 and older with no reported leisure-time physical activity	15.9%	17.9%
Limited Access to Healthy Food	Percentage of population that is low-income and does not live close to a grocery store	1.9%	3.3%
mRFEI	Percentage of food outlets that are classified as 'healthy'	0.2%	0.1%
Access to Exercise	Percentage of population with adequate access to locations for physical activity	90.0%	89.6%
STI Chlamydia Rate	Number of newly diagnosed chlamydia cases per 100,000	393.6	487.5
Teen Birth Rate	Number of births per 1,000 females aged 15-19	12.5	24.1
Adult Smokers	Percentage of adults who are current smokers	11.7%	11.0%

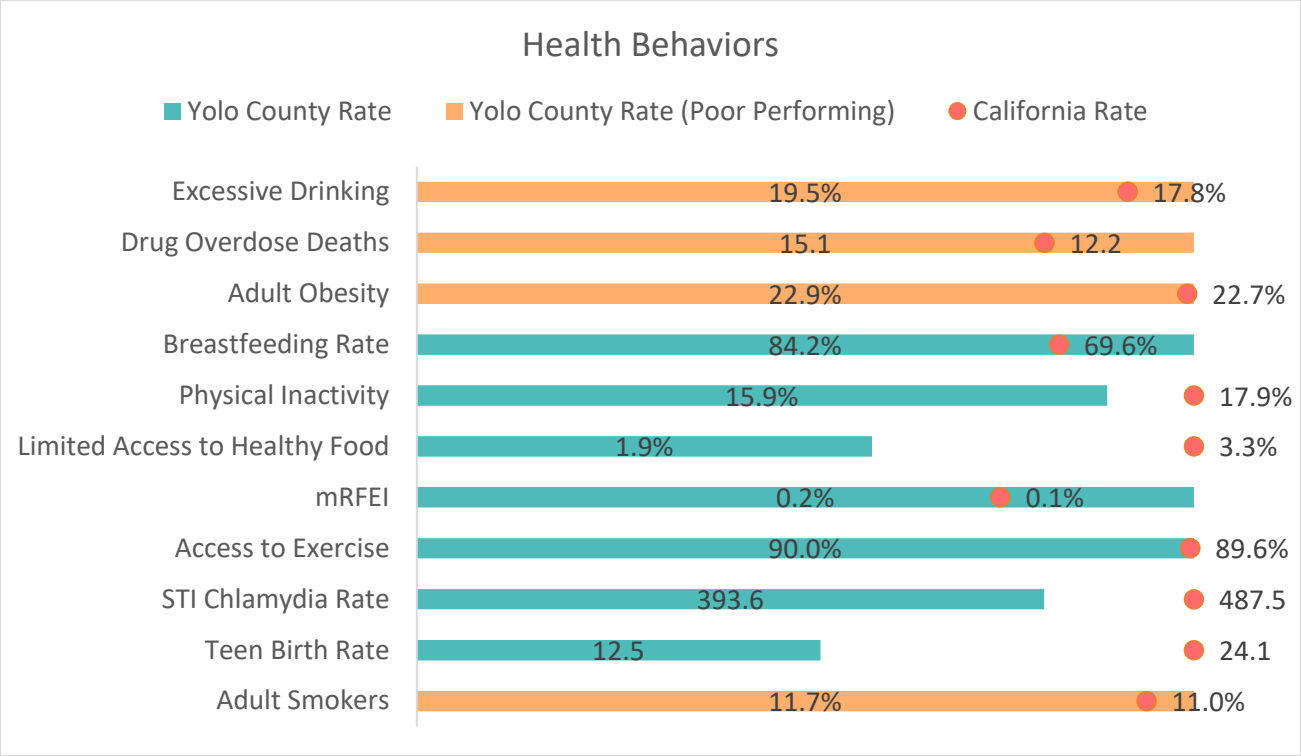

Figure 3: Health behavior indicators

Clinical Care

Table 4: Clinical Care Indicators Compared to State Benchmarks

Indicators	**Description**	**Yolo**	**California**
Health Care Costs	Amount of price-adjusted Medicare reimbursements per enrollee	$7,100	$9,100
HPSA Dental Health	Reports if a portion of the county falls within a Health Professional Shortage Area	No	
HPSA Mental Health	Reports if a portion of the county falls within a Health Professional Shortage Area	Yes	
HPSA Primary Care	Reports if a portion of the county falls within a Health Professional Shortage Area	No	
HPSA Medically Underserved Area	Reports if a portion of the county falls within a Medically Underserved Area	Yes	
Mammography Screening	Percentage of female Medicare enrollees aged 67-69 that receive mammography screening	63.2%	59.7%
Dentists	Number per 100,000 residents	57.5	82.3
Prenatal Care	Percentage of live births receiving prenatal care in the first trimester	82.8%	83.3%
Mental Health Providers	Number per 100,000 residents	334.6	308.2
Psychiatry Providers	Number per 100,000 residents	15.0	13.4
Specialty Care Providers	Number per 100,000 residents	207.4	183.2
Primary Care Physicians	Number per 100,000 residents	120.2	78.0
Preventable Hospital Stays	Number of hospital stays for ambulatory-care sensitive conditions per 1,000 Medicare enrollees	24.9	36.2

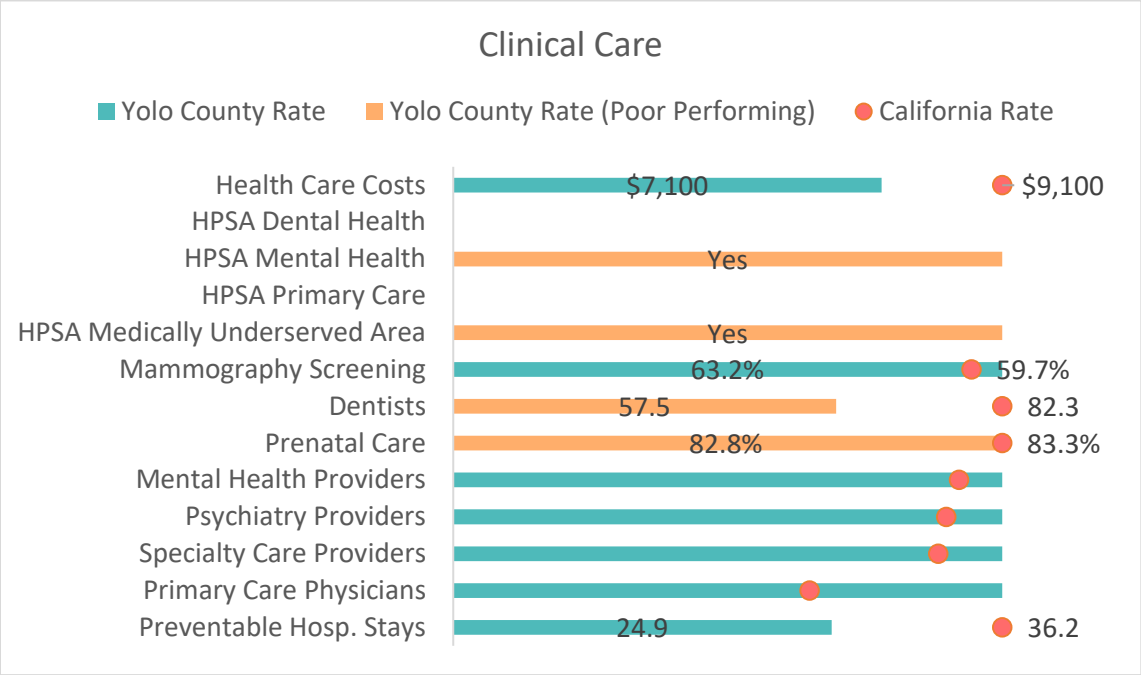

Figure 4: Clinical care indicators

Social and Economic or Demographic Factors

Table 5: Social and Economic or Demographic Factor Indicator Compared to State Benchmarks

Indicators	**Description**	**Yolo**	**California**
Homicides	Deaths per 100,000 residents	1.8	5.0
Violent Crimes	Reported violent crime offenses per 100,000	317.4	407.0
Motor Vehicle Crash Deaths	Deaths per 100,000 residents	10.0	8.5
Third Grade Reading	Percentage of students who are English language learners	40.3%	43.9%
English Language Learners	Percentage of third-grade students who met or exceeded language arts standards in the California assessment of student performance & progress	20.2%	20.4%
Some College	Percentage aged 25-44 with some post-secondary education	69.4%	63.5%
High School Graduation	Percentage of ninth-grade cohort graduating high school in 4 years	88.8%	82.3%
Unemployment Rate	Percentage of population 16 and older unemployed but seeking work	5.8%	5.4%
Children with Single Parents	Percentage of children living in a household headed by a single parent	28.0%	31.8%
Social Associations	Membership associations per 100,000 residents	6.5	5.8
Free Reduced Lunch	Percentage of children in public schools eligible for free or reduced-price lunch	52.3%	58.9%
Children in Poverty	Percentage of children under age 18 in poverty	15.2%	19.9%

Median Household Income	Median household income	$63,645	$67,715
Uninsured	Percentage of population under age 65 without health insurance	7.5%	9.7%

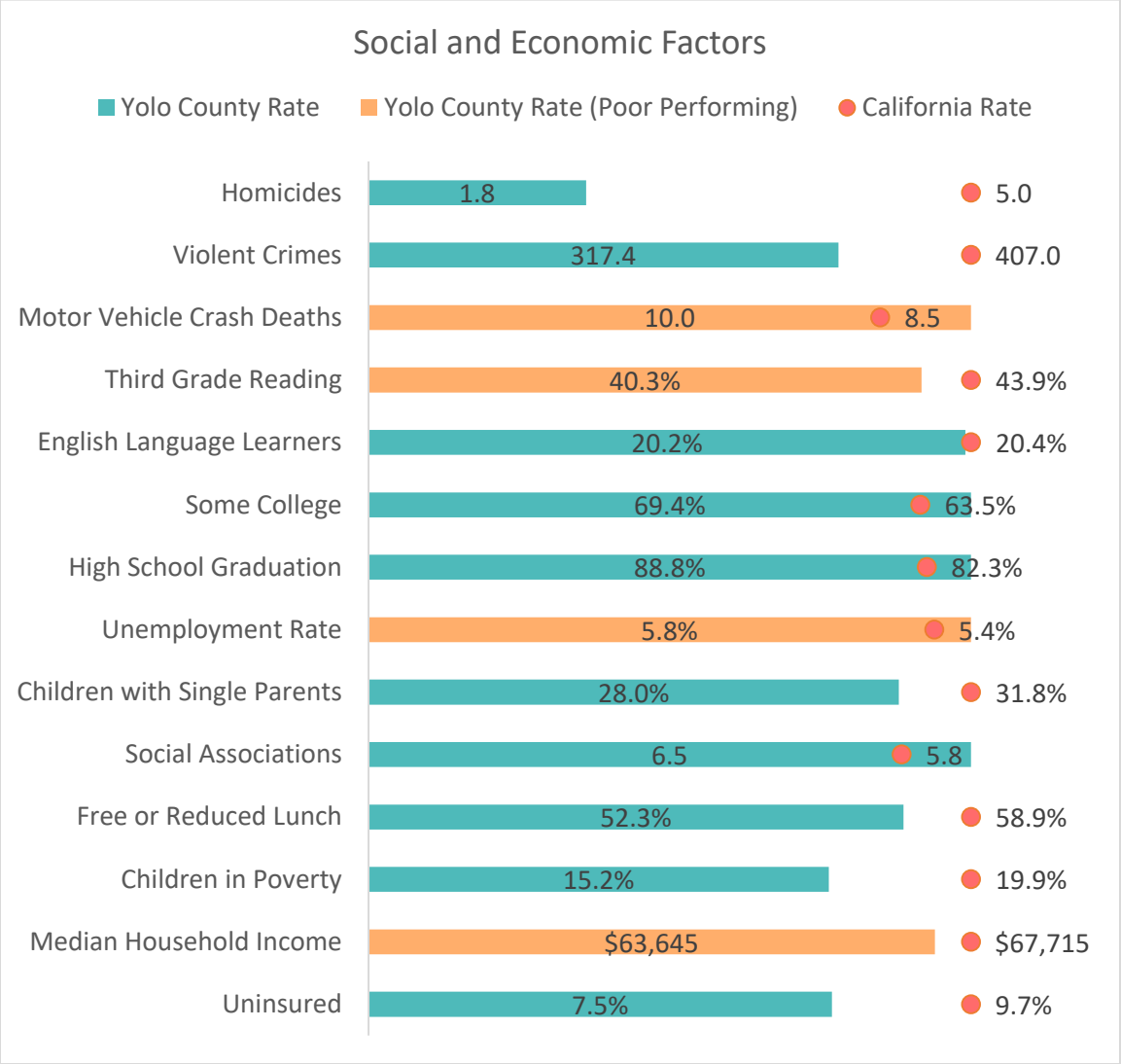

Figure 5: Social and economic factors

Physical Environment

Table 6: Physical Environment Indicators Compared to State Benchmarks

Indicators	Description	Yolo	California
Severe Housing Problems	Percentage of households with at least 1 of 4 housing problems: overcrowding, high housing costs, or lack of kitchen or plumbing facilities	25.0%	27.9%
Housing Units No Vehicle	Percentage of households with no vehicle available	7.9%	7.6%
Public Transit Proximity	Percentage of population living in a Census block within a quarter of a mile to a fixed transit stop	88.3%	
Pollution Burden	Percentage of population living in a Census tract with a CalEnviroscreen Pollution Burden score greater than the 50th percentile for the state	44.4%	50.4%
Air Particulate Matter	Average daily density of fine particulate matter in micrograms per cubic meter (PM2.5)	8.7	8.0
Drinking Water Violations	Reports whether there was a health-related drinking water violation in a community within the county	Yes	

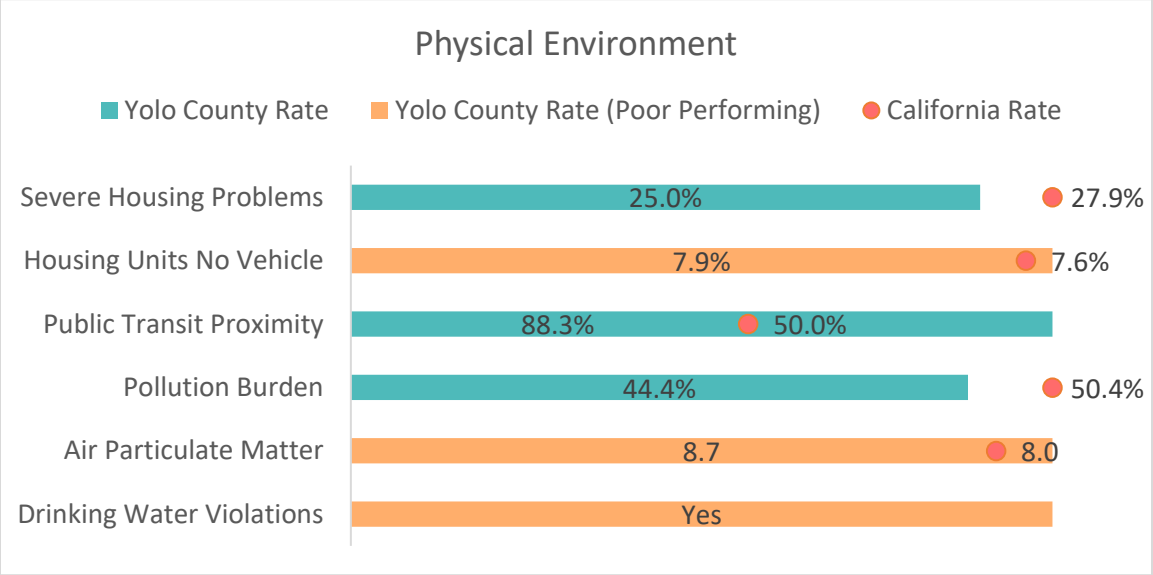

Figure 6: Physical environment

Survey Questions

Table 7. Survey Questions Compared to Relevant Benchmarks Indicating the Percentage of Respondents

Question	Yolo	Benchmark
Do you have a condition that limits one or more physical activities?	29.0%	29.7%
Have you ever been told you have asthma/lung disease/COPD/emphysema?	17.5%	14.8%
Have you ever been told you have an autoimmune disease (Lupus, Type 1 diabetes)?	5.2%	2.2%
Have you ever been told you have cancer?	5.8%	4.1%
Have you ever been told you have diabetes?	12.6%	9.1%
Have you ever been told you have heart disease	4.7%	6.2%
Have you ever been told you have hypertension?	16.9%	28.4%
Have you ever been told you have mental illness?	11.8%	8.0%
Have you ever been told you have a drug or alcohol problem?	2.8%	2.2%
Have you ever been told you have a physical disability?	8.5%	8.1%
Have you ever been told that you have obesity or overweight?	21.6%	27.9%
Needed behavioral health care in the past 12 months	26.5%	16.4%
Needed behavioral health care but didn't get it because of cost	27.7%	46.8%
Needed behavioral health care but didn't get it because of lack of comfort talking about it	15.2%	17.0%
Needed behavioral health care but didn't get it because of stigma	6.5%	21.3%
Needed behavioral health care but didn't get it because of lack of insurance coverage	8.2%	17.0%
Needed behavioral health care but didn't get it because of appointment availability	10.3%	14.9%
Needed behavioral health care but didn’t get it because didn't know where to go	20.7%	38.3%
Do you have health insurance? (Response: No)	8.2%	7.3%
Takes more than 30 minutes to get to doctor	14.5%	19.3%
Unsatisfied or very unsatisfied with getting an appointment quickly	15.3%	21.6%
Didn't receive medical screenings because it took too long	11.3%	20.6%
Didn't receive medical screenings because of language issues	3.3%	7.5%
Didn't receive medical screenings because of transportation	3.5%	7.5%
Didn't receive medical screenings because of clinic hours	4.4%	13.1%
Didn't receive medical screenings because of doctor availability	3.3%	8.4%
Didn't receive medical screenings because of lack of health insurance	11.7%	26.2%
Didn't receive medical screenings because of inadequate insurance	7.7%	18.7%
Didn't receive medical screenings because of lack of trust with providers	2.4%	4.7%
Went to Emergency Room (ER) because couldn't get urgent care appointment	14.9%	20.0%
Went to ER for prescription refill	4.9%	5.5%
Went to ER because more convenient	10.6%	9.7%
Went to ER because lack usual source of care	5.1%	6.9%
Do you have dental insurance? (Response: Yes)	67.2%	61.3%
Been to dentist in last 12 months (Response: Yes)	63.3%	70.3%

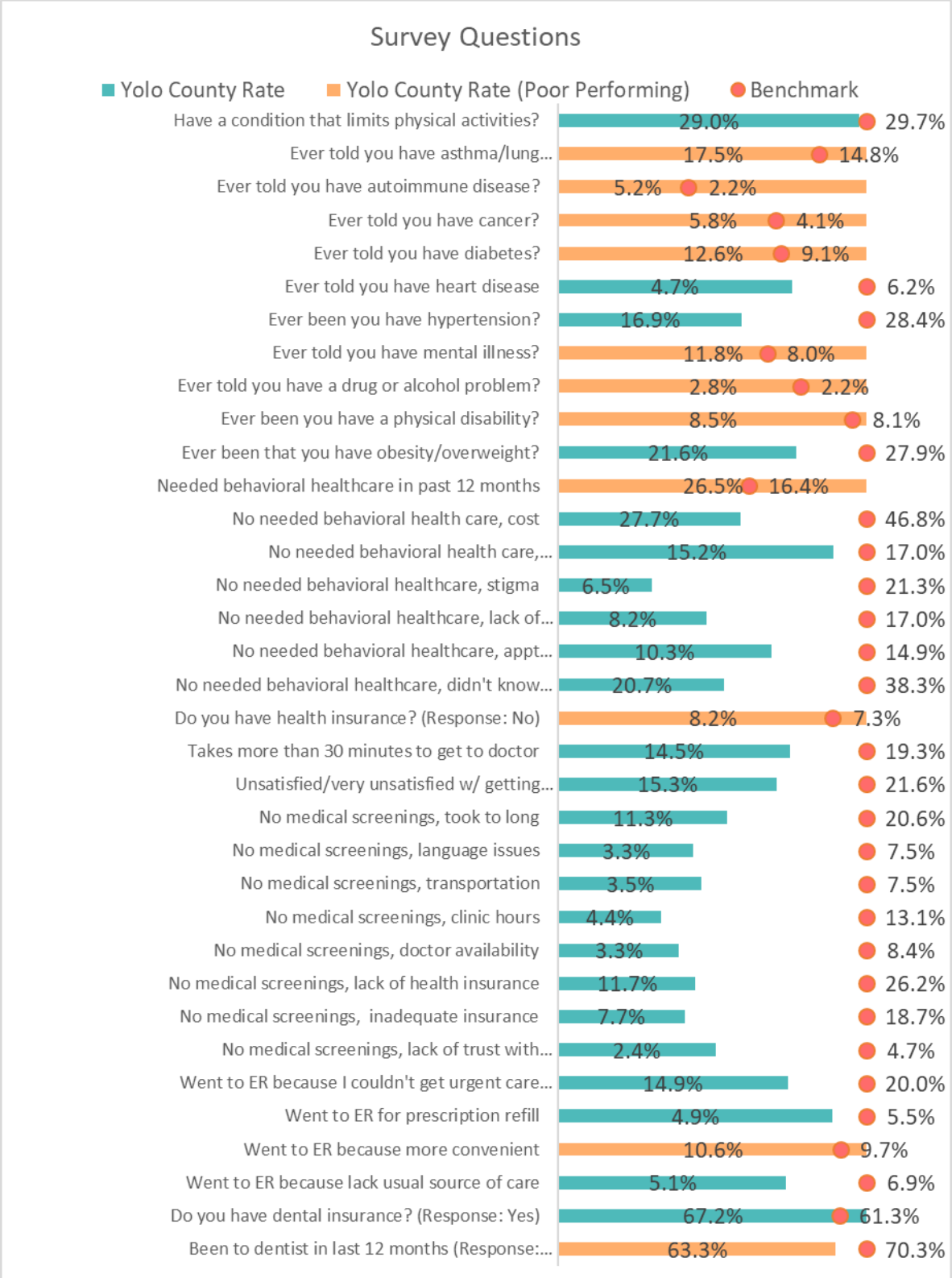

Figure 7: Countywide survey responses compared to relevant benchmarks

CHNA/CHA Methods and Processes

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

Conceptual Model

The conceptual model used in this needs assessment is shown in Figure 8. This model organizes populations' individual health-related characteristics in terms of how they relate to up- or downstream health and health-disparities factors. In this model, health outcomes (quality and length of life) are understood to result from the influence of health factors describing interrelated individual, environmental, and community characteristics, which in turn are influenced by underlying policies and programs.

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 Yolo County can be improved through policies and programs that address the health factors contributing to them. This conceptual model is a slightly modified version of the County Health Rankings Model used by the Robert Wood Johnson Foundation. It was altered by adding a "Demographics" category to the "Social and Economic Factors" in recognition of the influence of demographic characteristics on health outcomes.

To generate the list of secondary indicators used in the assessment, all partners reviewed each conceptual model category and discussed potential indicators that could be used or that were important to each partner to fully represent the category. The results of this discussion were then used to guide secondary data collection.

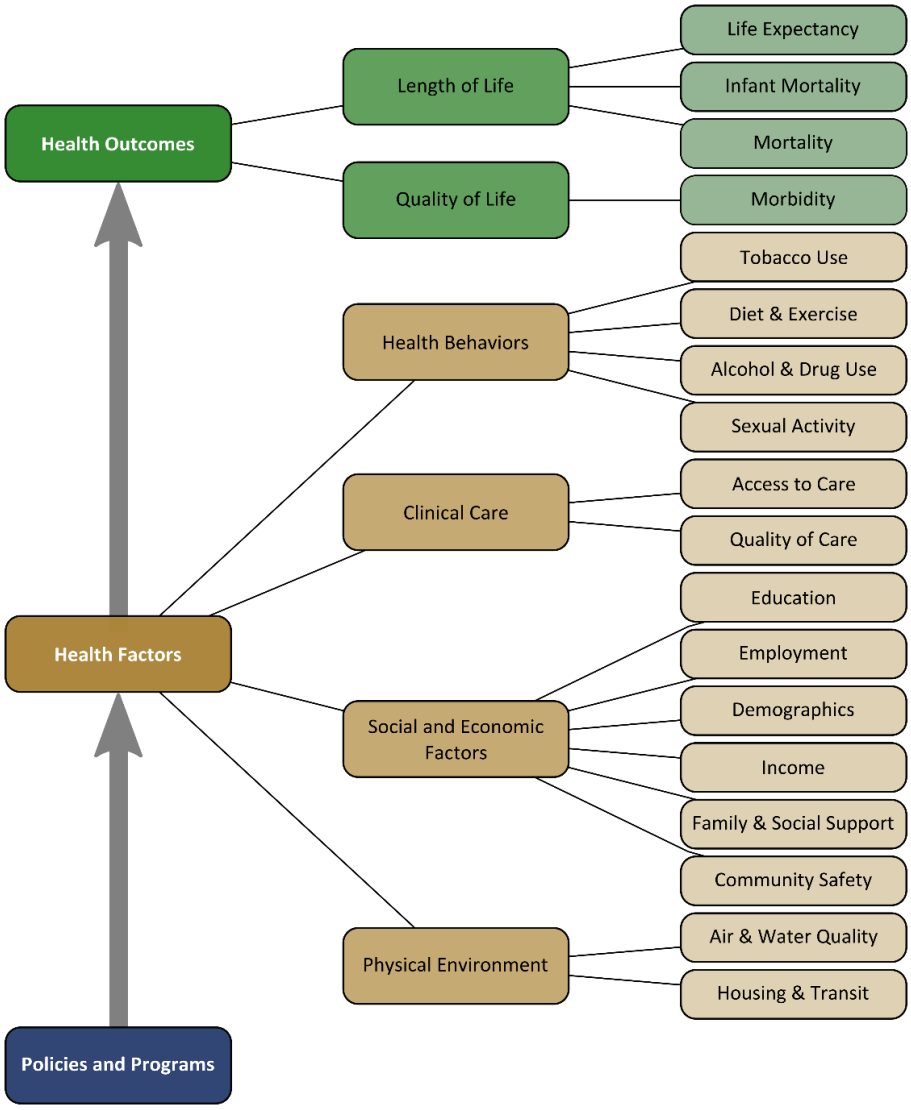

Figure 8: Community Health Assessment Conceptual Model as modified from the County Health Rankings Model, Robert Wood Johnson Foundation, and University of Wisconsin, 2015

Process Model

Figure 9 outlines the data collection and stages of this analysis. The project began by confirming the geographic area agreed to by the partners (Sutter Davis Hospital, Woodland Memorial Hospital, and Yolo County Health and Human Service Community Health Branch) for conducting the CHNA/CHA. All partners agreed that Yolo County would serve as the area over which the joint CHNA/CHA would occur.

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

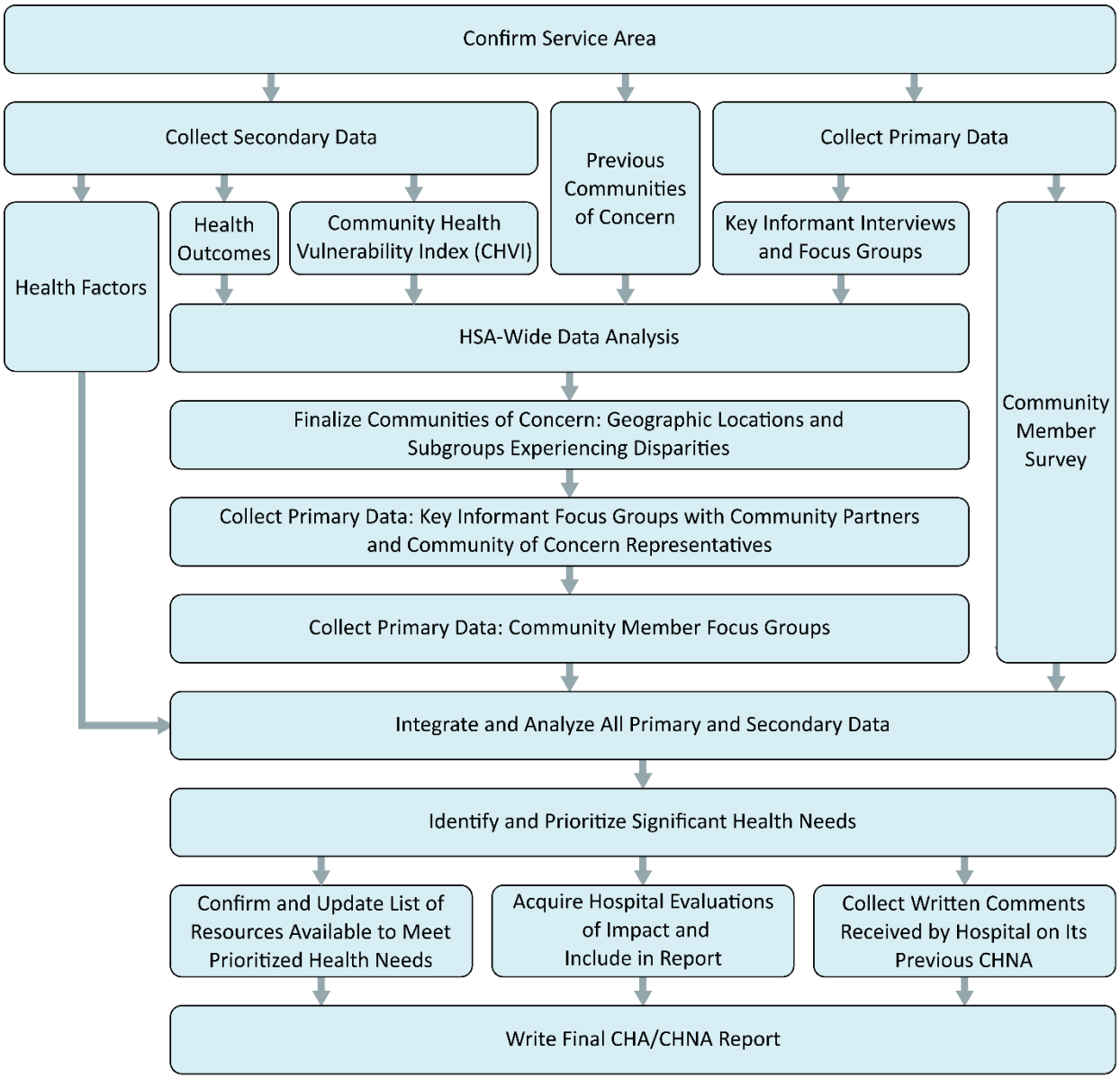

Figure 9: CHNA/CHA process model

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

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

Primary Data Collection and Processing

Primary Data Collection

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

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

Key Informant Results

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

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

Table 8 contains a listing of community health experts, or key informants, that contributed input to the CHNA/CHA. The table describes the name of the represented organization, the number of participants, area of expertise and organization, populations served by the organization, and the date of the interview. The instrument used, Key Informant Interview Guide, is contained in Appendix A.

Table 8: Key Informant Sample for Yolo County

Organization	**# of participants**	**Area of Expertise/Names of Organization(s)**	**Population(s) Served**	**Date**
Yolo County Public Health	8	Public Health: Countywide Public Health Officer, Children's Services, Countywide Health Promotion, Yolo County Emergency Response, Public Health Nursing	All Yolo County residents; youth of Yolo County, low-income residents of Yolo County	6.18.18
Woodland Memorial Hospital	8	Clinical Hospital Staff: Clinical Case Work, Emergency Room Staff, Hospital-Based Clinical Social Workers	Residents of Yolo County; Central Woodland community members, low-income, uninsured and underinsured community members	6.26.18
CommuniCare Health Centers Salud Clinic - West Sacramento	6	Federally Qualified Health Center (FQHC) Clinical Service Providers: Clinical Case Workers, Mental Health Coordinators, Medi-Cal Eligibility Case Workers, Behavioral Specialist	Low-income residents of Yolo County with a specific focus on community members from West Sacramento; uninsured and underinsured; community members suffering with mental illness; homeless community members	6.27.18
CommuniCare Health Centers Hansen Family Health Center	4	FQHC Community Clinic Service Providers: Preventive Healthcare Coordinator for Woodland Area; Sexual Health Educator, Behavioral Specialist	Low-income residents of Yolo County with a specific focus on Woodland; young adults and teens; homeless community members; community members engaging in substance abuse	6.28.18
Sutter Davis Hospital	1	Clinical Case Manager: Case Management Manager of Sutter Central Valley Area	Low-income residents of Yolo County and greater Central Valley Area; uninsured and underinsured	6.29.18
Sutter Davis Hospital	2	Clinical Case Management and ED Staff: Clinical Case Management for Davis Area	All residents of the Yolo County area with a specific focus on Davis. Low-income residents seeking health care access	7.10.18

Organization	# of participants	Area of Expertise/Names of Organization(s)	Population(s) Served	Date
Countywide Area Service Providers	26	Providers representing 25 separate community groups and topics: Stanford Youth Solutions, Yolo Community Care Continuum, Suicide Prevention and Crisis Service, Cache Creek Conservancy; Woodland United Way, Davis East Consulting, Fourth and Hope (homeless shelter), Yolo Healthy Aging Alliance, St. Johns Retirement, Citizens Who Care, Yolo County Children's Alliance, Tuleyone, Apex Care, Woodland's Dinner on Main, PRIDE Industry, Meals on Wheels, Yolo Employment Services, American Cancer Society, Soroptimist of Greater CA, Yolo Food Bank - Davis, CommuniCare Health Centers, First in Relief, Yolo Crisis Nursery	All Yolo County residents; youth and young adults struggling with substance abuse; community members needing mental health treatment; aging population; tribal county residents; low-income; community members struggling with food insecurity; LGBTQ+ community members; unemployed; homeless; uninsured and underinsured	06.01.18
Yolo Public Health Mental Health Partners	6	Mental Health Community Service Providers: Yolo Healthy Aging Alliance, Yolo County Mental Health Workgroup, Mental Health Services Act Yolo County Staff, NAMI YOLO Representative, Public Health Nurse – In-Home Support Services	Aging population of Yolo County; low-income older community members; residents struggling with mental health and substance abuse; home bound community members	08.09.18

Focus Group Results

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

Table 9 contains a listing of community resident groups that contributed input to the CHNA/CHA. The table describes the location of the focus group, the date it occurred, the total number of participants, and demographic information for focus group members.

Table 9: Focus Group List for Yolo County

Location	**Date**	**# of participants**	**Demographic Information**
Rural Innovations in Social Economics (RISE) in Esparto CA	08.10.18	11	Spanish-Speaking community members (including Migrant Farm Community members) from Woodland, Esparto, Capay, Madison and Winters
West Sacramento Capitol Courtyard in West Sacramento	8.21.18	10	Low-income, formally homeless, low access to stable housing, African American/Caucasian/Hispanic
Woodland - Yolo Hospice	09.07.18	11	Seniors living in the Woodland/Davis areas

Countywide Survey Results

A countywide survey was distributed from May 15, 2018, through July 31, 2018. The survey included questions from the Community Themes and Strengths Assessment conducted by Yolo County partners in 2014 as a part of the MAPP process and questions from a healthcare access survey from 2015. The partners combined both surveys, removed duplicative questions, and included other critical questions that were important to the partnership. The target sample was 1,200 participants. The total sample for the 2019 CHNA/CHA Countywide Survey was 2,291.

The survey was administered and analyzed by the Yolo County Health and Human Services Community Health Branch. Partners working on the CHNA/CHA helped with dissemination by both direct survey distribution and collection as well as by connecting with other area partners. The survey was available in hard copy and via an electronic submission link. Survey distribution included health providers (CommuniCare federally qualified health centers, Dignity Health, and Sutter Health), a summer camp program, food banks, multiple county steering committee members, senior centers, county libraries, city hall, CalFresh, WIC, Yolo County Service Centers, farmer's markets, and Meals on Wheels. Gift cards were provided as an incentive. For every 200 participants, a gift card drawing of $30 was given to 1 participant (11 gift cards in total). Data entry of the community surveys occurred from June to August 2018. The survey instrument is contained in Appendix A of this report. Figure 10 displays the racial/ethnic profile of the survey respondents in comparison to census counts for the county.

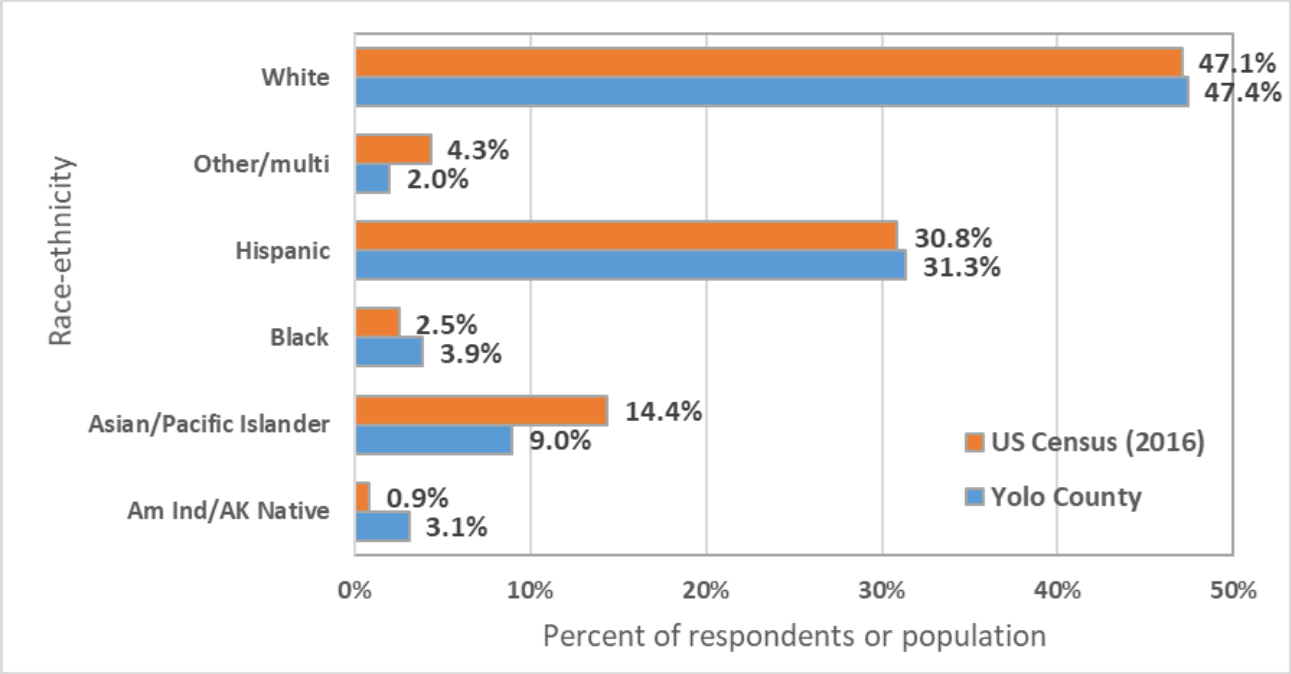

Figure 10: Survey of race/ethnicity profile for Yolo County (Yolo County) vs. 2016 U.S. Census profile for Yolo County (U.S. Census Bureau)

Primary Data Processing

Data were analyzed using NVivo 11 qualitative software. Key informants were also asked to write data directly onto a map of Yolo County for identification of vulnerable populations in the county. Content analysis included thematic coding to potential health need categories, the identification of special populations experiencing health issues, and the identification of resources. In some instances, data were coded in accordance with the interview question guide. Results were aggregated to inform the determination of prioritized significant health needs. Survey responses were organized by question, and frequency/distribution counts were compared to standard benchmarks, which included state and national benchmarks as well as comparison to survey results collected by Yolo County in 2014.

Secondary Data Collection and Processing

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

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

needs; and the sources for the socioeconomic and demographic variables obtained from the U.S. Census Bureau.

California Department of Public Health (CDPH) Health-Outcome Data

Mortality and birth-related data for each ZIP Code within the county were collected from the California Department of Public Health (CDPH). The specific indicators used are listed in Table 10. To increase the stability of calculated rates, each of these indicators were collected for the years from 2012 to 2016. The specific processing steps used to derive these rates are described below.

Table 10: Mortality and Birth-Related Indicators Used in the CHNA/CHA

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

ZIP Code Definitions

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

First, ZCTAs are approximate representations of ZIP Codes rather than exact matches. While this is not ideal, it is nevertheless the nature of the data being analyzed. Second, not all ZIP Codes have corresponding ZCTAs. Some PO Box ZIP Codes or other unique ZIP Codes (such as a ZIP Code assigned to a single facility) may not have enough addressees residing in a given census block to ever result in the creation of a ZCTA. But residents whose mailing addresses correspond to these ZIP Codes

will still show up in reported health-outcome data. This means that rates cannot be calculated for these ZIP Codes individually because there are no matching ZCTA population figures.

To incorporate these patients into the analysis, the point location (latitude and longitude) of all ZIP Codes in California[1] were compared to ZCTA boundaries.[2] 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, 95617 is a PO Box located in Davis, California. ZIP Code 95617 is not represented by a ZCTA, but it could have reported patient data. Through the process identified above, it was found that 95617 is located within the 95616 ZCTA. Data for both ZIP Codes 95617 and 95616 were therefore assigned to ZCTA 95616 and used to calculate rates. All ZIP Code level health-outcome variables given in this report are therefore reporting approximate rates for ZCTAs, but for the sake of familiarity of terms they are elsewhere presented as ZIP Code rates.

Rate Smoothing

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

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

The next step in the analysis process was to calculate rates for each of these indicators. However, rather than calculating raw rates, Empirical Bayes smoothed rates (EBRs) were created for all indicators possible.[3] 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

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

[2] 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

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

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 midpoint year of the 2012–2016 range of years for which CDPH data were collected. To calculate infant mortality rate, the total number of deaths for the population aged less than one year was divided by the total number of births.

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

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

Community Health Vulnerability Index (CHVI)

The CHVI is a health-care-disparity index largely based on the Community Need Index (CNI) developed by Barsi and Roth.[4] The CHVI uses the same basic set of demographic indicators to address healthcare disparities as outlined in the CNI, but these indicators are aggregated in a different manner to create the CHVI. For this report, the following nine indicators were obtained from the 2016 American Community Survey 5-year Estimate dataset at the census tract[5] level and are contained in Table 11.

Table 11: 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

[4] 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

[5] 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
Not a High School Graduate	Percentage of population over 25 that are not high school graduates	S1501	HC02_EST_VC17
Unemployed	Unemployment rate among the population 16 or older	S2301	HC04_EST_VC01
Families with Children in Poverty	Percentage of families with children that are in poverty	S1702	HC02_EST_VC02
Elderly Households in Poverty	Percentage of households with householders 65 years or older that are in poverty	B17017	HD01_VD01, HD01_VD08, HD01_VD14, HD01_VD19, HD01_VD25, HD01_VD30
Single-Female-Headed Households in Poverty	Percentage of single-female-headed households with children that are in poverty	S1702	HC02_EST_VC02
Renters	Percentage of the population in renter-occupied housing units	B25008	HD01_VD01, HD01_VD03
Uninsured	Percentage of population that is uninsured	S2701	HC05_EST_VC01

Each indicator was scaled using a min-max stretch so that the tract with the maximum value for a given indicator within the study area received a value of 1, the tract with the minimum value for that same indicator within the study area received a 0, and all other tracts received some value between 0 and 1 proportional to their reported values. All scaled indicators were then summed to form the final CHVI. Areas with higher CHVI values therefore represent locations with relatively higher concentrations of the target index populations and are likely experiencing greater 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 12 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 12: 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	Infant mortality	Infant Mortality Rate	CHR*	2010–2016
		Life expectancy	Preterm Birth (<37 weeks)	VRBIS**	2016
			Life Expectancy at Birth	Institute for Health Metrics and Evaluation***	2014
		Mortality	Age-Adjusted Mortality	CDPH†	2014–2016
			Alzheimer's Disease Mortality	CDPH	2012–2016
			Child (under age 18) Mortality	CHR	2013–2016
			Premature Age-Adjusted Mortality	CHR	2014–2016
			Premature Death (Years of Potential Life Lost)	CHR	2014–2016
			Cerebrovascular Disease (Stroke)	CDPH	2012–2016
			Chronic Lower Respiratory Disease	CDPH	2012–2016
			Diabetes Mellitus	CDPH	2012–2016
			Diseases of the Heart	CDPH	2012–2016
			Essential Hypertension & Hypertensive Renal Disease	CDPH	2012–2016
			Influenza and Pneumonia	CDPH	2012–2016
			Intentional Self-Harm (Suicide)	CDPH	2012–2016
			Liver Disease	CDPH	2012–2016
			Malignant Neoplasms (Cancer)	CDPH	2012–2016
			Nephritis, Nephrotic Syndrome and Nephrosis (Kidney Disease)	CDPH	2012–2016
			Unintentional Injuries (Accidents)	CDPH	2012–2016
	Quality of life	Morbidity	ED Visits for Asthma	OSHPD‡	2015–2016
			Mental Health/Drug Related Hospitalizations	OSHPD	2016
			Hospitalizations for Self-Inflicted Injuries in Youth (<18)	OSHPD	2013–2016
			Mental Health Hospitalizations in Young Adults Aged 15-24	OSHPD	2016
			Preventable Hospital Stays for Diabetes	OSHPD	2005–2016
			Breast Cancer Incidence	California Cancer Registry	2010–2014
			Colorectal Cancer Incidence	California Cancer Registry	2010–2014
			Diabetes Prevalence	CHR	2014
			Disability	Census	2016
			HIV Prevalence	CHR	2015
			Low Birth Weight	CHR	2010–2016

Conceptual Model Alignment			Indicator	Data Source	Time Period
			Lung Cancer Incidence	California Cancer Registry	2010–2014
			Prostate Cancer Incidence	California Cancer Registry	2010–2014
			Liver Cancer Incidence	California Cancer Registry	2006–2015
			ED Visits Due to Falls Age 65+	OSHPD	2014
			Hospitalizations Due to Falls 65+	OSHPD	2014
			ED Visits by Children with Dental Diagnosis	OSHPD	2016
			ED Visits by Adults with Dental Diagnosis	OSHPD	2016
			Colon Cancer Hospitalization	OSHPD	2016
			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
			Breastfeeding Rate (Exclusive In-Hospital)	CDPH	2016
			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
			Prenatal Care (1st Trimester)	VRBIS	2014–2016

Conceptual Model Alignment			Indicator	Data Source	Time Period
			Mental Health Providers	CHR	2017
			Psychiatrists	HRSA	2015
			Specialty Care Providers	HRSA	2015
			Primary Care Physicians	CHR	2015
		Quality Care	Preventable Hospital Stays (Ambulatory Care Sensitive Conditions)	CHR	2015
	Social & Economic/Demographic Factors	Community safety	Homicide Rate	CHR	2010–2016
			Violent Crime Rate	CHR	2012–2014
			Motor Vehicle Crash Death Rate	CHR	2010–2016
		Education	Third-Grade Reading Level	California Department of Education	2017
			English Language Learners	California Department of Education	2017–2018
			Some College (Postsecondary Education)	CHR	2012–2016
			High School Graduation	CHR	2014–2015
		Employment	Unemployment Rate	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

*County Health Rankings; further details in 20

** Vital Records Business Information System, Yolo County birth records

*** Institute for Health Metrics and Evaluation (IHME). United States Life Expectancy and Age-Specific Mortality Risk by County 1980-2014. Seattle, United States: Institute for Health Metrics and Evaluation (IHME), 2017.

†California Department of Public Health

‡California Office of Statewide Health Planning and Development

§Health Resources and Services Administration

County Health Rankings Data

All indicators listed with County Health Rankings (CHR) as their source were obtained from the 2018 County Health Rankings[6] dataset. This was the most common source of data, with 38 associated indicators included in the analysis. Indicators were collected at both the county and state levels. County-level indicators were used to represent the health factors and health outcomes in the county. State-level indicators were collected to be used as benchmarks for comparison purposes. All variables included in the CHR dataset were obtained from other data providers. The original data providers for each CHR variable are given in Table 13.

Table 13: County Health Rankings Data Set, Including Indicators, the Time Period the Data Were Collected, and the Original Source of the Data

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

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

CHR Indicator	Time Period	Original Data Provider
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 Rate	2016	Bureau of Labor Statistics Local Area Unemployment Statistics
Children in Single-Parent Households	2012–2016	ACS 5-Year Estimates
Social Associations	2015	County Business Patterns
Children Eligible for Free Lunch	2015–2016	National Center for Education Statistics
Children in Poverty	2016	U.S. Census Bureau Small Area Income and Poverty Estimates
Median Household Income	2016	U.S. Census Bureau Small Area Income and Poverty Estimates
Uninsured	2015	U.S. Census Bureau Small Area Health Insurance Estimates
Severe Housing Problems	2010–2014	HUD Comprehensive Housing Affordability Strategy (CHAS) Data
Air Pollution - Particulate Matter	2012	CDC's National Environmental Public Health Tracking Network
Drinking Water Violations	2016	Safe Drinking Water Information System

CDPH Data

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

Drug overdose deaths and age-adjusted mortality rates were also obtained from CDPH. These indicators report age-adjusted drug-induced death rates and age-adjusted all-cause mortality rates for counties and the state from 2014 to 2016 as reported in the 2018 County Health Status Profiles.[7]

HRSA Data

Indicators related to the availability of healthcare providers were obtained from the Health Resources and Services Administration[8] (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.

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

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

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

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

California Cancer Registry Data

Data obtained from the California Cancer Registry[9] 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.

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 14.

Table 14: Detailed Description of Data used to Calculate Percentage of Population with Disabilities, Households Without a Vehicle, and the Modified Retail Food Environment Index (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	

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

Indicator	Source Data Table	Variable	NAICS code	Employee Size Category	Data Source
Fruit and Vegetable Markets	BP_2016_00A3	Number of Establishments	445230	All Establishments	2016 County Business Patterns
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[10] using data obtained from the U.S. Census Bureau's 2016 County Business Pattern datasets.

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

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

CalEnviroScreen Data

CalEnviroScreen[11] is a dataset produced by CalEPA. It includes multiple indicators associated with various forms of pollution for census tracts within the state. These include multiple measures of air and water pollution, pesticides, toxic releases, traffic density, cleanup sites, groundwater threats, hazardous waste, solid waste, and impaired bodies of water. One indicator, pollution burden, combines all of these measures to generate an overall index of pollution for each tract. To generate a county-level pollution-burden measure, the percentage of the population residing in census tracts with pollution-burden scores greater than or equal to the 50th percentile was calculated for each county as well as for the state.

Google Transit Feed Specification (GTFS) Data

The final indicator used to identify significant health needs measures was proximity to public transportation. This indicator reports the percentage of a county's population that lives in a census block located within a quarter mile of a fixed transit stop. Census block data from 2010 (the most recent year available) was used to measure population.
An extensive search was conducted to identify stop locations for transportation agencies in the service area. Many transportation agencies publish their route and stop locations using the standard GTFS data format. Listings for agencies covering the service area were reviewed at TransitFeeds (https://transitfeeds.com) and Trillium (https://trilliumtransit.com/gtfs/our-work/). These were compared

[10] 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
[11] CalEPA. 2018. CalEnviroscreen 3.0 Shapefile. Available online at: https://data.ca.gov/dataset/calenviroscreen-30. Last accessed: May 26, 2018.

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

Table 15: Transportation Agencies Used to Compile the Proximity to Public Transportation Indicator

County	**Agency**
Solano	SoTrans, Delta Breeze (Rio Vista), Fairfield and Suisun Transit (FAST)
Sacramento County	SacRT, Elk Grove e-Trans, Folsom Stage Line (doesn't include South County Transit)
Yolo	YoloBus, Unitrans

Descriptive Socioeconomic and Demographic Data

The final secondary data set used in this analysis was comprised of multiple socioeconomic and demographic indicators collected at the ZCTA, county, and state level. These data were not used in an analytical context. Rather, they were used to provide a description of the overall population characteristics within the county. Table 16 lists each of these indicators as well as their sources.

Table 16: Descriptive Socioeconomic and Demographic Data Descriptions

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

Detailed Analytical Methodology

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

Community of Concern Identification

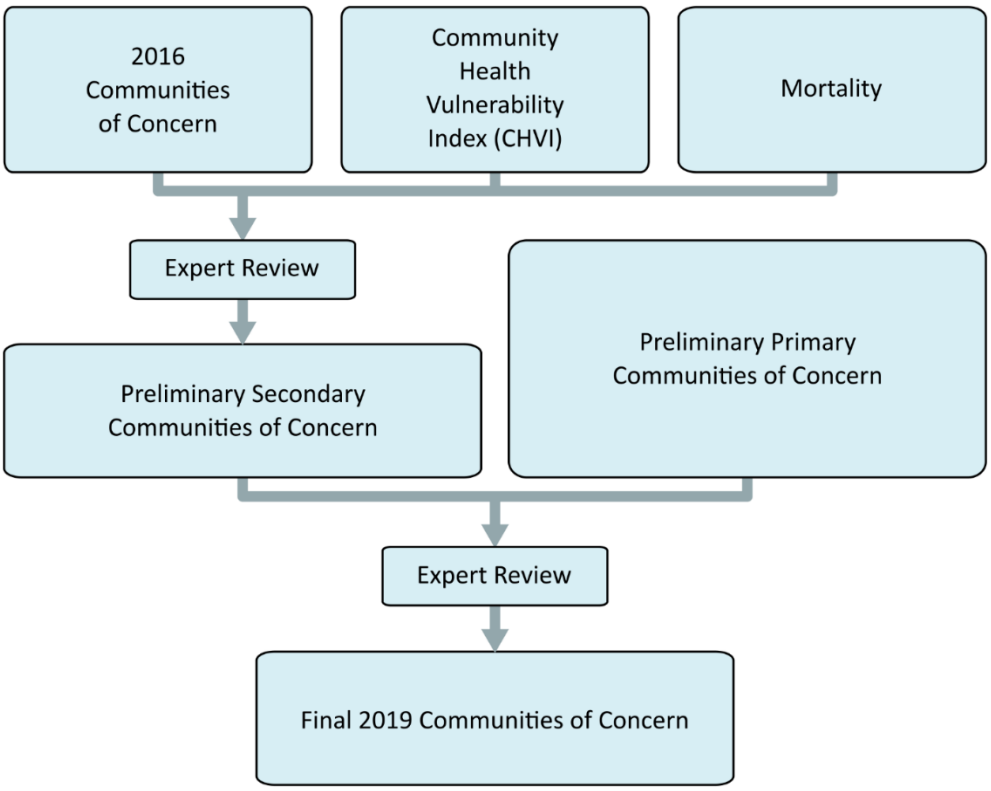

Figure 11: Process followed to identify Communities of Concern

As illustrated in Figure 11, the 2019 Communities of Concern were identified through a process that drew upon both primary and secondary data. Three main secondary data sources were used in this analysis: Communities of Concern identified in the 2016 CHNA; the census tract–level Community Health Vulnerability Index (CHVI); and the CDPH ZCTA-level mortality data.

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

2016 Community of Concern

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

Community Health Vulnerability Index (CHVI)

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

Mortality

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

Integration of Secondary Criteria

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

Preliminary Primary Communities of Concern

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

Integration of Preliminary Primary and Secondary Communities of Concern

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

Significant Health Need Identification

The general methods through which significant health needs (SHNs) were identified are shown in Figure 12 and described here in greater detail. The first step in this process was to identify a set of potential health needs (PHNs) from which significant health needs could be selected. This was done by reviewing the health needs identified during the 2016 CHNA among various hospitals throughout northern California and then supplementing this list based on a preliminary analysis of the primary qualitative data collected for the 2019 CHNA. This resulted in a list of 10 PHNs for the county, shown in Table 17.

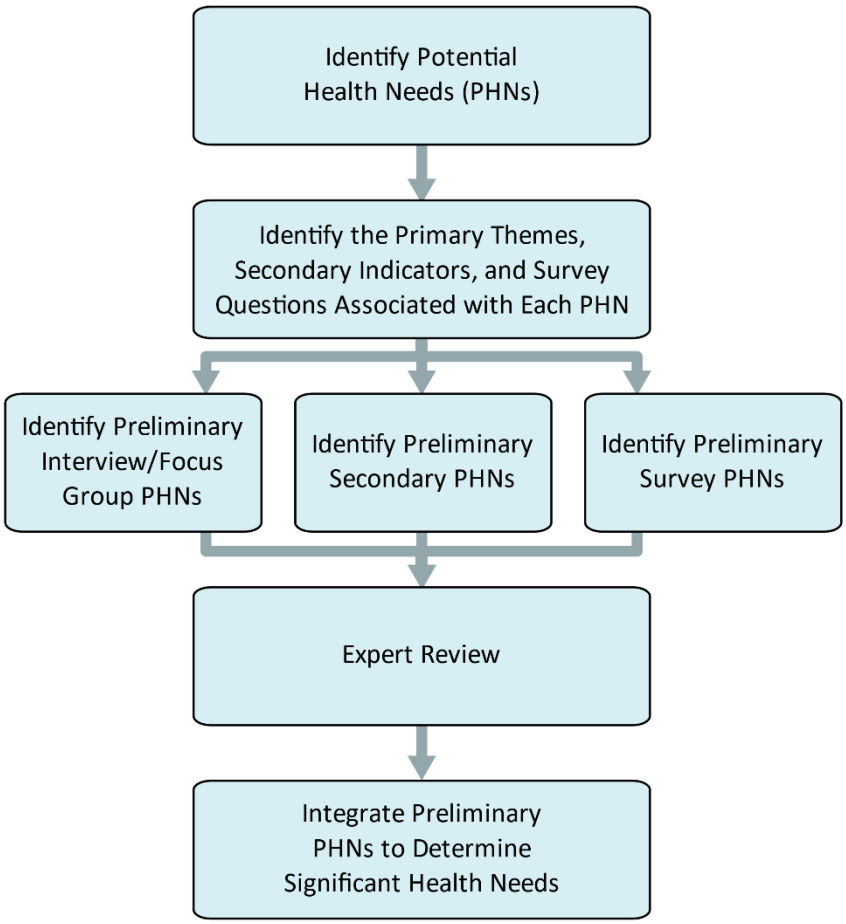

Figure 12: Process followed to identify Significant Health Needs

Table 17: 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, secondary indicators, and survey questions associated with each of these health needs as shown in Table 18. Primary theme associations were used to guide coding of the primary data sources to specific PHNs.

Table 18: Secondary Indicator, Primary Theme, and Survey Question Associations Used to Identify Significant Health Needs

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators	Survey Questions
PHN1	Access to Mental/ Behavioral/ Substance Abuse Services	• Life Expectancy at Birth • Liver Disease Mortality • Suicide Mortality • Poor Mental Health Days • Poor Physical Health Days • Drug Overdose Deaths • Excessive Drinking • Health Professional Shortage Area – Mental Health • Mental Health Providers • Psychiatrists • Social Associations • Liver Cancer Incidence • Mental Health/Drug Related Hospitalizations • Hospitalizations for Self-Inflicted Injuries in Youth • Mental Health Hospitalizations in Youth	• Self-Injury • Mental Health and Coping Issues • Substance Abuse • Smoking • Stress • Mentally Ill and Homeless • PTSD • Access to Psychiatrist • Homelessness	• Have you ever been told by a doctor that you have cancer? (Q17c) • Have you ever been told you have mental illness? (Q17g) • Have you ever been told you have a drug or alcohol problem? (Q17h) • Needed behavioral health care in past 12 months (Q18) • Needed behavioral health care but didn't get it because of cost (Q18b-a) • Needed behavioral health care but didn't get it because of lack of comfort talking about it (Q18b-b) • Needed behavioral health care but didn't get it because of stigma (Q18b-c) • Needed behavioral health care but didn't get it because of appt. availability(Q18b-e) • Needed behavioral health care but didn’t get it because didn't know where to go(Q18b-f)

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators	Survey Questions
PHN2	Access to Quality Primary Care Health Services	• Life Expectancy at Birth • Cancer Mortality • Child Mortality • Chronic Lower Respiratory Disease Mortality • Diabetes Mortality • Heart Disease Mortality • Hypertension Mortality • Influenza and Pneumonia Mortality • Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality • Breast Cancer Incidence • Colorectal Cancer Incidence • Diabetes Prevalence • Low Birth Weight • Lung Cancer Incidence • Prostate Cancer Incidence • Healthcare Costs • Health Professional Shortage Area – Primary Care • Medically Underserved Areas • Mammography Screening • Primary Care Physicians • Preventable Hospital Stays • Percentage Uninsured	• Issue of Quality of Care • Access to Care • Health Insurance • Care for Cancer/Cancer Occurrence • Indicators in PQI: Diabetes, COPD, CLD, Hypertension (HTN), Heart Disease (HTD), Asthma, Pneumonia	• Have you ever been told you have cancer? (Q17c) • Have you ever been told you have diabetes? (Q17d) • Have you ever been told you have heart disease? (Q17e) • Have you ever been told you have hypertension? (Q17f) • Takes more than 30 minutes to get to doctor (Q22) • Unsatisfied or very unsatisfied with getting an appointment quickly (Q24) • Didn't receive medical screenings because it took too long (Q26a-a) • Didn't receive medical screenings because of language issues (Q26a-c) • Didn't receive medical screenings because of clinic hours (Q26a-e) • Didn't receive medical screenings because of doctor availability (Q26a-f) • Didn't receive medical screenings because of inadequate insurance (Q26a-h)

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators	Survey Questions
		• Prenatal Care (1st Trimester) • Liver Cancer Incidence • Hospitalizations for Diabetes, Long-Term Complications • Preterm Births • ED Visits for Asthma • Colon Cancer Hospitalizations		• Didn't receive medical screenings because of lack of trust with providers (Q26a-j) • Went to ER because I couldn't get urgent care appt. (Q27-b) • Went to ER for prescription refill (Q27-e) • Went to ER because more convenient (Q27-f) • Went to ER because lack usual source of care (Q27-g)
Health Need Number	**2019 CHI Potential Health Needs**	**2019 CHI Secondary Indicators**	**Primary Indicators**	**Survey Questions**
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 Deserts • Chronic Disease Outcomes Related to Poor Eating • Diabetes, HTD, HTN, Stroke, Kidney issues, Cancer • Access to Parks • Places to be Active	• Have you ever been told you have cancer? (Q17c) • Have you ever been told you have diabetes? (Q17d) • Have you ever been told you have heart disease? (Q17e) • Have you ever been told you have hypertension? (Q17f) • Have you ever been told that you have obesity/overweight? (Q17j)

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators	Survey Questions
		• Breastfeeding Rate (Exclusive In-Hospital) • Hospitalizations for Diabetes, Long-Term Complications • Colon Cancer Hospitalizations		
PHN4	Safe and Violence-Free Environment	• Life Expectancy at Birth • Poor Mental Health Days • Homicide Rate • Motor Vehicle Crash Death Rate • Violent Crime Rate • Social Associations • Mental Health/Drug-Related Hospitalizations • Hospitalizations for Self-Inflicted Injuries in Young Adults • Mental Health Hospitalizations in Youth (<18)	• 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	• Have you ever been told you have mental illness? (Q17g) • Have you ever been told you have a drug or alcohol problem? (Q17h)
PHN5	Access to Dental Care and Preventive Services	• Dentists per population • Health Professional Shortage Area – Dental • ED Visits by Children with Dental Diagnosis • ED Visits by Adults with Dental Diagnosis	• Any Issues Related to Dental Health • Access to Dental Care	• Do you have dental insurance? (Q28) • Been to dentist in last 12 months (Q28)

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators	Survey Questions
PHN6	Pollution-Free Living Environment	• Cancer Mortality • Chronic Lower Respiratory Disease Mortality • Breast Cancer Incidence • Colorectal Cancer Incidence • Lung Cancer Incidence • Prostate Cancer Incidence • Adult Smoking • Air Pollution – Particulate Matter • Drinking Water Violations • Pollution Burden • ED Visits for Asthma	• Smoking • Unhealthy Air, Water, Housing • Health Issues: Asthma, COPD, CLRD, Lung Cancer	• Have you ever been told you have asthma/lung disease/COPD/ emphysema? (Q17a) • Have you ever been told you have cancer? (Q17c)
PHN7	Access to Meeting Basic Needs Such as Housing, Jobs, and Food	• Life Expectancy at Birth • Infant Mortality • Age-Adjusted All-Cause Mortality • Child Mortality • Premature Age-Adjusted Mortality • Premature Death (Years of Potential Life Lost) • Low Birth Weight • Medically Underserved Areas • Healthcare Costs • High School Graduation • Some College (Postsecondary Education) • Unemployment • Children in Single-Parent Household • Social Associations	• Employment and Unemployment • Poverty • Housing Issues • Homelessness • Education Access • Community Quality of Life • Housing Availability • Housing Affordability	• Have you ever been told you have asthma/lung disease/COPD/ emphysema? (Q17a) • Have you ever been told that you have obesity/overweight? (Q17j) • Needed behavioral health care but didn't get it because of lack of insurance coverage (Q18b-d) • Do you have health insurance? (Q19-NO) • Didn't receive medical screenings because of lack of health insurance (Q26a-g)

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators	Survey Questions
		• Children Eligible - Free or Red Lunch • Children in Poverty • Median Household Income • Uninsured • Severe Housing Problems • Households with No Vehicle • mRFEI • Limited Access to Healthy Food • Breastfeeding Rate (Exclusive in Hospital) • Third-Grade Reading Level • English Language Learners • ED Visits Asthma		
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	• Do you have a condition that limits one or more physical activities? (Q16) • Have you ever been told you have a physical disability? (Q17i) • Didn't receive medical screenings because of transportation (Q26a-d)
PHN9	Access to Specialty and Extended Care	• Life Expectancy at Birth • Alzheimer's Mortality • Cancer Mortality • Chronic Lower Respiratory Disease Mortality • Diabetes Mortality • Heart Disease Mortality	• Seeing a Specialist for Health Conditions • Diabetes-Related Specialty Care • Specialty Care for HTD, HTN, Stroke, Kidney Diseases	• Have you ever been told you have cancer? (Q17c) • Have you ever been told you have diabetes? (Q17d) • Have you ever been told you have heart disease? (Q17e) • Have you ever been told you have

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators	Survey Questions
		• Hypertension Mortality • Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality • Diabetes Prevalence • Lung Cancer Incidence • Psychiatrists • Specialty Care Providers • Preventable Hospital Stays • Liver Cancer Incidence • Colon Cancer Hospitalizations		hypertension? (Q17f)
PHN10	Injury and Disease Prevention and Management	• Infant Mortality • Alzheimer's Mortality • Child Mortality • Chronic Lower Respiratory Disease Mortality • Diabetes Mortality • Heart Disease Mortality • Hypertension Mortality • Influenza and Pneumonia Mortality • Kidney Disease Mortality • Liver Disease Mortality • Stroke Mortality • Suicide Mortality • Unintentional Injury Mortality • Diabetes Prevalence • HIV Prevalence Rate	• Anything Related to Helping Prevent a Preventable Disease or Injury • Unintentional Injury • Smoking and Alcohol/Drug Abuse • Teen Pregnancy • HIV/STD • Tuberculosis (TB) • Influenza and Pneumonia • Health Classes • Health Promotion Teams and Interventions • Need for Health Literacy	• Have you ever been told you have asthma/lung disease/COPD/ emphysema? (Q17a) • Have you ever been told you have autoimmune disease (Lupus, Type 1 diabetes)? (Q17b) • Have you ever been told you have cancer? (Q17c) • Have you ever been told you have diabetes? (Q17d) • Have you ever been told you have heart disease? (Q17e) • Have you ever been told you have hypertension? (Q17f) • Have you ever been told you have mental illness? (Q17g)

Health Need Number	2019 CHI Potential Health Needs	2019 CHI Secondary Indicators	Primary Indicators	Survey Questions
		• Low Birth Weight • Drug Overdose Deaths • Excessive Drinking • Adult Obesity • Physical Inactivity • Sexually Transmitted Infections (Chlamydia) Rate • Teen Birth Rate • Adult Smoking • Motor Vehicle Crash Death Rate • Breastfeeding Rate (Exclusive In-Hospitals) • Prenatal Care (1st Trimester) • Hospitalizations for Diabetes, Long-Term Complications • Liver Cancer Incidence • ED Visits for Asthma • Mental Health/Drug Related Hospitalizations • Hospitalizations for Self-Inflicted Injuries in Young Adults • Mental Health Hospitalizations in Youth (<18) • ED Visits Due to falls Age 65+ • Hospitalization Due to Falls Age 65+ • Colon Cancer Hospitalization		• Have you ever been told you have a drug or alcohol problem? (Q17h) • Have you ever been told that you have obesity/overweight? (Q17j)

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

Table 19: Benchmark Comparisons to Show Indicator Performance for Yolo County CHNA/CHA Indicators

Indicator	**Benchmark Comparison Indicating Poor Performance**
Years of Potential Life Lost	Higher
Poor Physical Health Days	Higher
Poor Mental Health Days	Higher
Low Birth Weight	Higher
Adult Smokers	Higher
Adult Obesity	Higher
Physical Inactivity	Higher
Access to Exercise	Lower
Excessive Drinking	Higher
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
Child Mortality	Higher
Infant Mortality	Higher
Diabetes Prevalence	Higher

Indicator	Benchmark Comparison Indicating Poor Performance
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 Pneumonia Mortality	Higher
Kidney Disease Mortality	Higher
Liver Disease Mortality	Higher
Life Expectancy	Lower
Age-Adjusted Mortality	Higher
Pollution Burden	Higher
Public Transit Proximity	Lower
Percentage with Disability	Higher

Survey-question response rates were similarly compared to relevant benchmarks to determine which identified issues within the county. Most benchmarks were drawn from related state-level surveys. State benchmarks did not exist for some of the survey questions used. Various strategies were used to identify benchmarks for these questions, including comparing them to rates collected in previous county surveys, or picking arbitrary but reasonable standards. Table 20 shows the direction of comparison used to compare each survey question to its related benchmark.

Table 20: Benchmark Comparisons for Yolo County CHNA/CHA Survey Questions

County	**Direction**
Do you have a condition that limits one or more physical activities?	Higher
Have you ever been told you have asthma/lung disease/COPD/emphysema?	Higher
Have you ever been told you have autoimmune disease (Lupus, Type 1 diabetes)?	Higher
Have you ever been told you have cancer?	Higher
Have you ever been told you have diabetes?	Higher
Have you ever been told you have heart disease	Higher
Have you ever been told you have hypertension?	Higher
Have you ever been told you have mental illness?	Higher
Have you ever been told you have a drug or alcohol problem?	Higher
Have you ever been told you have a physical disability?	Higher
Have you ever been told that you have obesity/overweight?	Higher
Needed behavioral health care in past 12 months	Higher
Needed behavioral health care but didn't get it because of cost	Higher
Needed behavioral health care but didn't get it because of lack of comfort talking about it	Higher
Needed behavioral health care but didn't get it because of stigma	Higher
Needed behavioral health care but didn't get it because of lack of insurance coverage	Higher
Needed behavioral health care but didn't get it because appointment availability	Higher
Needed behavioral health care but didn’t get it because didn't know where to go	Higher
Do you have health insurance? (Response: No)	Higher
Takes more than 30 minutes to get to doctor	Higher
Unsatisfied or very unsatisfied with getting an appointment quickly	Higher
Didn't receive medical screenings because it took too long	Higher

County	Direction
Didn't receive medical screenings because of language issues	Higher
Didn't receive medical screenings because of transportation	Higher
Didn't receive medical screenings because of clinic hours	Higher
Didn't receive medical screenings because of doctor availability	Higher
Didn't receive medical screenings because of lack of health insurance	Higher
Didn't receive medical screenings because of inadequate insurance	Higher
Didn't receive medical screenings because of lack of trust with providers	Higher
Went to ER because I couldn't get urgent care appt.	Higher
Went to ER for prescription refill	Higher
Went to ER because more convenient	Higher
Went to ER because lack usual source of care	Higher
Do you have dental insurance? (Response: Yes)	Lower
Been to dentist in last 12 months (Response: Yes)	Lower

Once these poorly performing quantitative indicators were identified, they were used to identify preliminary secondary significant health needs. This was done by calculating the percentage of all secondary indicators associated with a given PHN that were identified as performing poorly within the county. While all PHNs represented actual health needs within the county to a greater or lesser extent, a PHN was considered a preliminary secondary health need if the percentage of poorly performing indicators exceeded one of a number of established thresholds: any poorly performing associated secondary indicators; or at least 20%, 25%, 33%, 40%, 50%, 60%, 66%, 75%, or 80% of the associated indicators were found to perform poorly. These thresholds were chosen because they correspond to divisions of the indicators into fifths, quarters, thirds, or halves. A similar set of standards was used to identify the preliminary interview and focus group health needs: any of the survey respondents mentioned a theme associated with a PHN, or if at least 20%, 25%, 33%, 40%, 50%, 60%, 66%, 75%, or 80% of the respondents mentioned an associated theme. Finally, the same basic set of standards was used to identify preliminary survey health needs: any poorly performing survey question; or at least 20%, 25%, 33%, 40%, 50%, 60%, 66%, 75%, or 80% of the associated survey questions were found to perform poorly.

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

For this Yolo County report, a PHN was selected as a preliminary secondary significant health need if one of the following criteria was met: 50% of the associated indicators were identified as performing poorly, the need was identified by 50% or more of the sources as performing poorly, or survey questions assigned to the need were flagged.

Health Need Prioritization

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

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

Survey responses provided a final method to include community voice within the prioritization process. Survey respondents were asked (in three separate questions) to identify the three biggest health issues that most affect the community, the three individual behaviors most responsible for health issues in the community, and the three environmental issues most responsible for health issues in the community. Respondents were able to select from a list of issues or write in their own. All responses selected by at least 20% of respondents were identified for each of these questions, and these responses were coded to the PHNs as show in Table 21 below. A final measure was calculated by dividing the total number of times a response associated with a given health need was found by the total number of responses indicated by at least 20% of survey respondents.

Table 21: Survey Responses Used in Health Need Prioritization

Biggest Health Issues Affecting the Community	**Associated Potential Health Needs**
Alcoholism	1
Cancer	2, 3, 6
Diabetes	2, 3, 9, 10
Mental Health Issues	1
Obesity	3, 10
Individual Behaviors Most Responsible for the Health Issues	Associated Potential Health Needs
Alcohol Use	1
Drug Abuse	1, 10
Lack of Exercise	3, 10
Life Stress/Lack of Coping	1, 7
Poor Nutrition/Eating Habits	3
Environmental Issues Most Responsible for Health Issues	Associated Potential Health Needs
Cigarette Smoke	6, 10
Heat/Hot Days	7
Lack of Access to Healthy Foods	3
Poor Housing Conditions	7
Air Pollution	6

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

Detailed List of Resources to Address Health Needs for Yolo County

Table 22: Resources Potentially Available to Address Significant Health Needs Identified in the CHNA/CHA

Organization Information			Significant Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/ behavioral/ substance abuse services	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violence-free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs such as housing, jobs, and food	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
211	County wide	211Yolocounty.com	X	X	X	X	X	X	X	X	X	X
ACES – Yolo County office of Education	95776	ycoe.org/districts			X	X						
Agency on Again – Area 4	95815	agencyonaging4.org	X	X		X			X		X	X
All Leaders Must Serve	95776	allleadersmustserve.org							X			
Alternatives Pregnancy Center	95825	alternativespc.org	X	X								
Alzheimer's Association	95815	alz.org/norcal	X								X	X
American Cancer Society	95815	cancer.org		X						X		X
American Red Cross	95815	redcross.org		X					X			
Another Choice Another Chance	95823	acacsac.org	X									
ApexCare	95825	apexcare.com	X	X					X	X	X	
Big Brothers Big Sisters	95825	bbbs-sac.org	X			X						
Breathe California of Sacramento-Emigrant Trails	95814	sacbreathe.org		X				X				X
Bryte and Broderick Community Action Network	95605	bryteandbroderick.org			X				X	X		
California Accountable Communities for Health Initiative (CACHI)	95605	cachi.org		X					X			X
Capay Valley	95627	capayvalleyvision.net			X	X			X	X		
Cash Creek Conservancy	95695	cashcreekconservancy.org			X			X	X			

Organization Information			Significant Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/ behavioral/ substance abuse services	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violence-free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs such as housing, jobs, and food	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
Children's Home Society of California – Woodland	95695	chs-ca.org							X			
Citizens Who Care	95695	citizenswhocare.us				X					X	
CommuniCare Health Centers	95605, 95616, 95627, 95695	communicarehc.org	X	X	X		X					X
Community Housing Opportunity Corp	95695	chochousing.org							X			
Davis Community Meals	95616	daviscommunitymeals.org							X			
Davis Community Transit	95616	cityofdavis.org								X		
Davis Senior Center	95616	cityofdavis.org		X	X	X			X		X	
Del Oro Caregiver Resource Center	95610	deloro.org	X	X							X	X
Dixon Migrant Farm Labor Camp	95620	ych.ca.gov							X			
Elica Health Centers	95691, 95816, 95818, 95825, 95838	elicahealth.org	X	X			X					
Empower Yolo	95695	empowerYolo.org	X			X			X			
Eskaton	95608	eskaton.org	X	X	X	X			X		X	
Explorit Science Center	95618	explorit.org							X			
First 5 Yolo	95618	first5Yolo.org	X	X	X				X			
First In, Relief for Evacuees	95695	firstinrelief.com							X			

Organization Information			Significant Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/ behavioral/ substance abuse services	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violence-free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs such as housing, jobs, and food	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
Gender Health Center	95817	thegenderhealthcenter.org	X	X		X			X			
Girl Scouts Heart of Central California	95695	girlscoutshcc.org			X				X			
Golden Days Adult Day Health	95691	(916) 371-6011		X		X					X	
Goodwill – Sacramento Valley & Northern Nevada	95776	goodwillsacto.org							X			
Habitat for Humanity Yolo County	95695	HabitatYolo.org							X			
Head Start – Yolo County Office of Education	95605, 95616, 95627, 95695	https://www.ycoe.org	X		X	X			X			
Health Education Council	95691	healthedcouncil.org			X	X						
Holy Cross Parish	95605	scd.org							X			
Knights Landing Family Resource Center	95645	empowerYolo.org/family-resource-centers/		X		X			X			X
Knights Landing One Health Center	95645	knightslandingclinic.org		X								
Legal Services of Northern California – Health Rights	95814	lsnc.net							X			
Lilliput Children's Services	95695	lilliput.org							X			
Madison Migrant Center		cdicdc.org			X	X						
(Child Development Centers)	95834											
Meals on Wheels Yolo County	95776	mowYolo.com							X			

Organization Information			Significant Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/ behavioral/ substance abuse services	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violence-free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs such as housing, jobs, and food	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
Mercy Housing	95838	mercyhousing.org							X			
My Sister's House	95818	my-sisters-house.org	X	X		X			X			
NAMI Yolo	95695	namiYolo.org	X									
Northern California Children's Therapy Center	95695	ctchelpkids.org		X							X	
Outa Sight Group	95695	outasightgroup.com			X				X			
Pregnancy Support Group	95695	pregnancysupportgroup .org	X						X			
PRIDE Industries	95747	prideindustries.com							X			
Progress House	95695	progresshouseinc.org	X						X			
Resilient Yolo (Aces Connection)	95776	acesconnection.com/g/ Yolo-county-ca-aces	X						X			
RISE Inc.	95695	rise.org	X	X	X	X			X			
Sacramento LGBT Community Center	95811	saccenter.org	X	X		X			X			
Safety Center Inc.	95695	safetycenter.org				X						X
Saint John's Retirement Village	95695	sjrv.org	X	X	X	X			X		X	
Saint Luke's Episcopal Church	95695	stlukeswoodland.org							X			
Saint Vincent de Paul Sacramento Council	95816	svdp-sacramento.org							X			
Salvation Army	95695	salvationarmyusa.org							X			
Senior Link of Yolo County	95695	lsnc.net/seniorlink	X	X	X				X		X	
Shingle Springs Tribal TANF Program	95825	shinglespringsrancheria .com/tanf/							X			

Organization Information			Significant Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/ behavioral/ substance abuse services	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violence-free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs such as housing, jobs, and food	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
Shores of Hope	95605	shoresofhope.org	X		X	X			X	X		
Short Term Emergency Aide Committee (STEAC)	95616	steac.org							X			
Shriner's Hospital for Children – Northern California	95817	shrinershospitalforchildren.org/sacramento		X							X	
Slavic Assistance Center	95825	slaviccenter.us							X			
Soroptimist International of Woodland	95776	soroptimistofwoodland.org							X			
Stanford Youth Solutions	95826	youthsolutions.org	X			X			X			
STAY Well Center	95776	wcc.yccd.edu/student/wellness-center/	X	X								
Suicide Prevention and Crisis Services of Yolo County	95617	suicidepreventionYolocounty.org	X			X						
Summer House Inc.	95616	summerhouseinc.org	X	X	X	X	X		X	X		
Sutter Davis Hospital	95616	sutterhealth.org/davis	X	X	X							X
The Californian	95695	thecalifornian.net	X	X	X	X			X		X	
The Keaton's Childhood Cancer Alliance	95661	childcancer.org										X
The Mental Health America of California	95814	mhac.org	X									
Tuleyome	95695	tuleyome.org			X			X				
Turning Point Community Programs	95670	tpcp.org	X						X			
United Cerebral Palsy (UCP) of	95841	ucpsacto.org			X	X			X	X	X	

Organization Information			Significant Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/ behavioral/ substance abuse services	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violence-free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs such as housing, jobs, and food	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
Sacramento & Northern Calif.												
University of California, Davis	95616	ucdavis.edu							X			
VA Northern California Healthcare System	95655	northerncalifornia.va.gov	X	X					X			
Volunteers of America – Northern California & Northern Nevada	95821	voa-ncnn.org	X						X			
Walter's House – Fourth and Hope	95695	fourthandhope.org	X						X			
WarmLine Family Resource Center	95818	warmlinefrc.org	X	X					X			
West Beamer Place Housing	95695	(530) 419-5976							X			
West Sacramento Community Center	95691	cityofwestsacramento.org/residents			X							
Wind Youth Services	95817	windyouth.org	X			X			X			
Winter's Healthcare Foundation	95694	wintershealth.org	X	X	X		X					X
Woodland Community Care Car	95776	communitycarecar.org								X		
Woodland Community College Foundation	95776	wcc.yccd.edu/foundation/							X			
Woodland Community Senior Center	95776	cityofwoodland.org		X	X				X		X	
Woodland Ecumenical and Multi-Faith Ministries	95695	woodlandmultifaith.com							X			

Organization Information			Significant Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/ behavioral/ substance abuse services	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violence-free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs such as housing, jobs, and food	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
Woodland Memorial Hospital	95695	dignityhealth.org	X	X								X
Woodland School District	95695	wjusd.org							X			
Woodland United Way	95695	woodlandunitedway.org	X	X					X			
Woodland Youth Services	95695	woodlandyouthservices.org	X						X			
YMCA of Superior California	95695	ymcasuperiorcal.org			X	X						
Yolo Adult Day Health Center – Woodland Healthcare	95695	dignityhealth.org/sacramento/services/Yolo-adult-day-health-services	X	X	X	X			X		X	X
Yolo Bus	95776	Yolobus.com								X		
Yolo Center for Families	95695	Yolofamilies.org		X		X			X			
Yolo Community Care Continuum	95695	y3c.org	X			X			X			
Yolo County CASA	95695	Yolocasa.org	X			X						
Yolo County Children's Alliance	95616	Yolokids.org		X		X			X			
Yolo County Health and Human Services Agency	95695	Yolocounty.org/health-human-services	X	X	X	X		X	X			X
Yolo County Housing	95695	ych.ca.gov							X			
Yolo County WIC	95695	Yolocounty.org/health-human-services		X	X							X
Yolo Crisis Nursery	95618	Yolocrisisnursery.org	X			X			X			
Yolo Employment Services	95695	Yoloes.org							X			
Yolo Food Bank	95776	Yolofoodbank.org			X				X			

Organization Information			Significant Health Need Met (X)									
Name	ZIP Code	Website	1. Access to mental/ behavioral/ substance abuse services	2. Access to quality primary care health services	3. Active living and healthy eating	4. Safe and violence-free environment	5. Access to dental care and preventive services	6. Pollution-free living environment	7. Access to basic needs such as housing, jobs, and food	8. Access and functional needs	9. Access to specialty and extended care	10. Injury and disease prevention and management
Yolo Healthy Aging Alliance	95616	Yolohealthyaging.org	X	X	X				X		X	X
Yolo Hospice	95618	Yolohospice.org		X		X			X		X	

Limits and Information Gaps

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

As always with primary data collection, gaining access to participants that best represented the populations needed for this assessment was a challenge. This was increasing difficult in the rural areas of the county identified as Communities of Concern. In addition, though efforts were made to insure adequate sample size of the countywide survey, the survey was administered via convenience sample by the multiple partners of the project. Convenience sampling limits generalizability of the survey findings. As the survey questions were not specifically written to the various potential health need categories, the survey data were limited in its scope to speak directly to the identification of various health needs. However, any health need, where specific survey data were assigned, that performed poorly against benchmark comparisons was included as a significant health need in the CHNA/CHA finding. In addition, all primary data are self-reported data, which has inherent limitations in accuracy.

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

Appendix A: CHNA/CHA Data Collection Instruments

Key Informant Interview Guide

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

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, Social factors, Economic factors, Clinical Care factors, Physical (Built) environment

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

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

7) What other people, groups or organizations would you recommend we speak to about the health of the community?
- i) Name 3 types of service providers that you would suggest we include in this work?
- ii) Name 3 types of community members that you would recommend we speak to in this work?

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

Focus Group Interview Guide

1. **BACKGROUND**
    a. Where in the county (HSA) do you live?
        i. Specific town? General area?
    b. How would you describe the community (ies) you live in using a few words?
        i. Probe for:
            1. Specific geographic areas?
            2. Specific populations served?
                1. *Who? Where? Racial/ethnic make-up, physical environment (urban/ rural, large/small*
2. **HEALTH ISSUES**
    a. What are the biggest health needs in the community that you live?
        i. *INSERT MAP exercise: Please use this map to help our team understand where communities that experience health burdens live?*
            1. Probe for:
                1. What specific geographic locations struggle with health issues the most?
                2. What specific groups of community members experience health issues the most?
3. **CHALLENGES/BARRIERS**
    a. What are the challenges (barriers) to being healthy for the community you live in?
        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; Social factors; Economic factors; Clinical Care factors; 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?**

Countywide Survey Instrument

Yolo County Health Status Survey

The purpose of this survey is to better understand your opinions about your health and the health of the Yolo County community. The results will help Yolo County Department of Public Health, area hospitals (Woodland Memorial Hospital) and local community clinics support important community health initiatives and projects to improve the health of Yolo County residents.

In order to participate in taking the survey we ask that you meet the following:

- You live in Yolo County
- You understand that taking this survey is voluntary
- You agree to only take the survey once

We deeply appreciate your time as we know it is valuable. The survey should only take about 10 minutes.

Background Information

1. What city in Yolo County do you live in?

- ❑ Clarksburg
- ❑ Esparto
- ❑ Madison
- ❑ Woodland
- ❑ Davis
- ❑ Guinda
- ❑ West Sacramento
- ❑ Yolo
- ❑ Dunnigan
- ❑ Knights Landing
- ❑ Winters
- ❑ Other _____

2. How long have you lived in Yolo County?

- ❑ Less than 1 year
- ❑ 1 - 5 years
- ❑ 5 – 10 years
- ❑ 10 – 20 years
- ❑ Over 20 years
- ❑ I have lived here all my life

3. What is your age?

- ❑ Under 18
- ❑ 19-24
- ❑ 25-34
- ❑ 35-44
- ❑ 45-54
- ❑ 55-64
- ❑ 65- 74
- ❑ 75-84
- ❑ 85 or older
- ❑ Decline to answer

4. Are you Hispanic or Latino?

- ❑ Yes (Hispanic, Latino)
- ❑ No
- ❑ Decline to answer

5. What race do you most identify with?

- ❑ Asian
- ❑ Black/African American
- ❑ White/Caucasian
- ❑ Native American/Indigenous Persons
- ❑ Native Hawaiian or other Pacific Islander
- ❑ Other _____

6. What is your current gender identity?

- ❑ Female
- ❑ Male
- ❑ Genderqueer
- ❑ Transgender Male/Transman/FTM
- ❑ Transgender Female/Transwoman/MTF
- ❑ Decline to Answer
- ❑ Additional Category (please describe) _____

7. Which describes your current employment status?

- ❑ Full-time
- ❑ Part-time
- ❑ Retired
- ❑ Unemployed
- ❑ Disabled
- ❑ Student
- ❑ Decline to answer

8. What is or was your main occupation?
   - ❑ City, county, or state government
   - ❑ Construction
   - ❑ Education
   - ❑ Farming/agriculture
   - ❑ Health care
   - ❑ Manufacturing/factory
   - ❑ Power or utility company
   - ❑ Restaurant/fast food
   - ❑ Retail store
   - ❑ Technical/Professional
   - ❑ Transport or trucking
   - ❑ Work from home
   - ❑ Student
   - ❑ Other: _____

9. If you are you a student, which describes your current enrollment?

   - ❑ Full time
   - ❑ Part time

   9a. Which college/university/school/program are you enrolled in?
   _____

10. What language(s) do you primarily speak at home?
    - ❑ English
    - ❑ Spanish
    - ❑ Russian
    - ❑ Other: _____
    - ❑ Decline to answer

11. How many people live in your home, including yourself? _____ ❑ Decline to answer

12. What is your annual household income?
    - ❑ Less than $10,000
    - ❑ $10,000 to $19,999
    - ❑ $20,000 to $29,999
    - ❑ $30,000 to $39,999
    - ❑ $40,000 to $49,999
    - ❑ $50,000 to $59,999
    - ❑ $60,000 to $69,999
    - ❑ $70,000 to $79,999
    - ❑ $80,000 to $89,999
    - ❑ $90,000 to $99,000
    - ❑ $100,000 to $149,999
    - ❑ $150,000 to $249,999
    - ❑ 250,000 or greater
    - ❑ Decline to answer

Your Personal Health

13. In general, you would describe your current overall health status as:

- ❑ Excellent
- ❑ Very Good
- ❑ Good
- ❑ Fair
- ❑ Poor

14. Do you have a condition that limits one or more physical activities?

❑Yes If YES, answer question 14a.
❑ No If No, please skip to question 15.

14a. If yes, which activities are affected? Check all that apply.

- ❑ Walking, climbing stairs, reaching, lifting, or carrying
- ❑ Dressing, bathing, or getting around inside your home
- ❑ Going outside the home alone to shop or visit the doctor
- ❑ Difficulty working at a job or business
- ❑ Other: _____

15. Have you ever been told by a doctor that you have: Check all that apply.

- ❑ Asthma/lung disease/COPD/emphysema
- ❑ Autoimmune disease (like Lupus, Type 1 Diabetes)
- ❑ Cancer
- ❑ Diabetes (Type 2 Diabetes, Gestational Diabetes)
- ❑ Heart disease
- ❑ Hypertension (high blood pressure)
- ❑ Mental illness
- ❑ Drug or alcohol problem
- ❑ Physical disability
- ❑ Obesity/overweight
- ❑ Other: _____

16. Was there ever a time during the past 12 months when you felt that you might need to see a professional because of problems with your mental health, emotions, nerves, or use of alcohol or drugs?

❑ Yes (If YES, go to question 16a) ❑ No (If NO, go to question 16b)

16a. If Yes, have you seen a doctor or mental health professional (counselor, psychiatrist, or social worker) for problems with your mental health, emotions, nerves, or your use of alcohol or drugs?

❑ Yes ❑ No

16b. If NO, you did not seek medical care, why not? Check all that apply.

- ❑ I was concerned about the cost of treatment.
- ❑ I did not feel comfortable talking with a professional about my personal problems.
- ❑ I was concerned about what would happen if someone found out I had a problem.
- ❑ My insurance does not cover treatment for mental health problems.
- ❑ I was not able to get an appointment.
- ❑ I did not know where to go for help.
- ❑ Other: _____

17. Do you have health insurance?

❑ Yes (If YES, go to question 17a)

❑ No (if NO, go to questions 17b)

17a. If Yes, you do have health insurance, what type:
❑ Private – employer or someone else's employer
❑ Private – Covered California
❑ Private – individual plan
❑ Medi-Cal
❑ Medicare
❑ Military or VA
❑ Other government
❑ Don't know
❑ Other: _____

17b. If No, you DO NOT have health insurance:
Do you plan to get health insurance through Covered California?
❑ Yes
❑ No
❑ Not Sure

17c. Are you eligible for Medi-Cal or Medicare?
❑ Yes
❑ No
❑ Don't know

18. Did you see a doctor in the past 12 months?

❑ Yes (If YES, go to 18a)
❑ No

18a. If YES, I have seen a doctor in the past 12 months:
How many times did you see your doctor in the past 12 months?
❑ Once
❑ 2 - 5 times
❑ 6 or more
❑ Don't know

18b. Would you have liked to (or felt you needed to) see a doctor more often than this?
❑ Yes ❑ No

19. How far do you travel to your regular doctor?
❑ 0-5 miles ❑ 6-10 miles ❑11-15 miles ❑16-20 miles ❑ More than 20 miles

20. How long does it normally take you to get to your regular doctor's office from your home?
❑ Less than 5 minutes ❑ 5-10 minutes ❑10-20 minutes ❑ 20-30 minutes
❑ 30-45 minutes ❑ 45-60 minutes ❑ More than an hour

21. When you last called the medical clinic for an appointment, how quickly could you be seen by a doctor?
___ days OR ___ weeks OR ❑ Don't know

21a. Were you satisfied with how quickly you were able to get an appointment?
❑ Very Satisfied
❑Satisfied
❑ Neutral
❑ Unsatisfied
❑ Very Unsatisfied

22. How important is it to you to have regular health care services and medical screenings?
- ❑ Extremely Important
- ❑ Very Important
- ❑ Neutral
- ❑ Somewhat Important
- ❑ Not Important

23. Have you received health care services or medical screenings in the past 12 months?
❑ Yes ❑ No (If NO, go to 24a)

23a. If no, please check all that apply.
- ❑ I have to wait too long to see a doctor
- ❑ I was/am too busy
- ❑ The doctor does not speak the same language as I do
- ❑ I did not have transportation to the medical clinic
- ❑ The medical clinic is not open all of the time, so it is difficult to get an appointment
- ❑ There are not enough doctors in my area, so it is difficult to get an appointment
- ❑ I did/do not have any health insurance
- ❑ I did/do have health insurance, but it does not cover all of my costs
- ❑ I did not need health care services or medical screenings because I was not sick
- ❑ I do not trust the health care providers
- ❑ Not sure / Don't know
- ❑ Other: _____

24. Did you visit the emergency room in the past 12 months?
- ❑ Yes (If YES, go to question 25a)
- ❑ No (In NO, go to question 26)

24a. If Yes, on your last visit, did you go there because you: Check all that apply.
- ❑ Had a life-threatening illness or injury
- ❑ Could not get an urgent care appointment with my doctor
- ❑ Became ill or injured before 8am or after 5pm on a weekday
- ❑ Became ill or injured during the weekend
- ❑ Needed to refill a prescription
- ❑ Thought it seemed more convenient than waiting for an appointment
- ❑ Do not have a regular doctor, this is my usual source of care

25. Do you have dental insurance?
❑ Yes ❑ No ❑ Unsure

26. Have you been to the dentist in the past 12 months?
❑ Yes ❑ No

27. Did you become sick or injured on the job in the past 12 months?
❑ Yes ❑ No ❑ Not applicable (not working)

27a. If Yes, did you seek medical care for your job-related illness or injury?
- ❑ Yes
- ❑ No

27b. If No, why not? _____

Health Status of the Yolo County Community

28. What do you think are the three biggest health issues that most affect our community? Choose three (3):
- ❑ Health problems associated with aging
- ❑ Cancer
- ❑ Dental problems
- ❑ Heart disease
- ❑ Infectious diseases (e.g., hepatitis, tuberculosis, etc.)
- ❑ Mental health issues
- ❑ Child abuse and neglect
- ❑ Motor vehicle/Bicycle accidents
- ❑ Poor birth outcomes
- ❑ Respiratory illnesses/lung disease/asthma
- ❑ Sexually transmitted diseases
- ❑ Homicide
- ❑ Stroke
- ❑ Teenage pregnancy
- ❑ Sexual abuse
- ❑ Alcoholism
- ❑ Diabetes
- ❑ Obesity
- ❑ □ Other_____
- ❑ □ Other_____

29. What do you think are the three individual behaviors that are most responsible for health issues in our community? Choose three (3):
- ❑ Alcohol abuse
- ❑ Driving while drunk/on drugs
- ❑ Drug abuse
- ❑ Lack of exercise
- ❑ Poor nutrition/eating habits
- ❑ Not getting "shots" (vaccines) to prevent disease
- ❑ Smoking/tobacco use
- ❑ Unsafe sex
- ❑ Using weapons/guns
- ❑ Not getting regular check-ups by a health care provider
- ❑ Distracted driving
- ❑ Crime/violence
- ❑ Suicide
- ❑ Life stress/lack of coping skills
- ❑ Teenage sex
- ❑ Domestic or intimate partner violence
- ❑ Other_____
- ❑ Other_____

30. What do you think are the three social and economic circumstances that are most responsible for health issues in our community? Choose three (3):
- ❑ Unemployment
- ❑ Poverty
- ❑ Homelessness
- ❑ Lack of education/no high school education
- ❑ Cultural barriers
- ❑ Racism and discrimination
- ❑ No health insurance
- ❑ Language barriers

- ❑ Not enough food (food insecurity)
- ❑ Single parenting
- ❑ Other_____
- ❑ Other_____

31. What do you think are the three environmental issues that are most responsible for health issues in our community? Choose three (3):

- ❑ Air pollution
- ❑ Pesticide use
- ❑ Poor housing conditions
- ❑ Poor neighborhood design
- ❑ Heat/hot days
- ❑ Lack of safe walkways and bikeways
- ❑ Cigarette smoke
- ❑ Trash on streets & sidewalks
- ❑ Flooding/drainage problems
- ❑ Contaminated drinking water
- ❑ Lack of access to healthy foods
- ❑ Lack of access to places for physical activity
- ❑ Lack of public transportation
- ❑ Traffic
- ❑ Other_____
- ❑ Other_____

32. What do you think are the three most important factors of a "healthy community"?
Choose three (3):

- ❑ Safe place to raise kids
- ❑ Green/open spaces
- ❑ Job opportunities
- ❑ Good schools
- ❑ Access to health care
- ❑ Access to healthy food
- ❑ Low crime/safe neighborhoods
- ❑ Parks and recreation facilities
- ❑ Affordable housing
- ❑ Support agencies (faith-based organizations, support groups, social worker outreach)
- ❑ Tolerance for diversity
- ❑ Air quality
- ❑ Elderly care
- ❑ Well-informed community about health issues
- ❑ Community involvement
- ❑ Time for family
- ❑ Access to childcare
- ❑ Other _____
- ❑ Other _____

33. Is there anything else you would like us to know about your personal health or the health status of the Yolo County Community?

_____