



2016 Community Health Needs Assessment

Sutter Santa Rosa Regional Hospital
License #110000005

Approved by Sutter Health Bay Area Board of Directors
November, 2016

To provide feedback about this Community Health
Needs Assessment, email clearyp@sutterhealth.org

SONOMA COUNTY COMMUNITY HEALTH NEEDS ASSESSMENT

CHNA REPORT FOR SUTTER SANTA ROSA REGIONAL HOSPITAL

Acknowledgements

Conducting a large-scale community health needs assessment of the size and scope contained in this report would not be possible without the contributions of many members of our community. Sonoma County Community Health Needs Assessment Collaborative wishes to express its gratitude for the contributions made by those who participated in the development of this assessment.

Sonoma County Community Health Needs Assessment Steering Committee

- KFH-Santa Rosa
- Sutter Health, Sonoma County
- St. Joseph Health—Sonoma County
- Sonoma County Department of Health Services

District Collaborative Partners

- North Sonoma County Health Care District
- Palm Drive Health Care District
- Sonoma Valley Health Care District

Community Partners

Convening robust focus groups with community residents was made possible by support from community organizations, including:

- La Luz Center
- Community Action Partnership (CAP) of Sonoma County
- St. Joseph Health—Sonoma County
- Russian River Area Resources and Advocates (RRARA)
- The Petaluma Health Care District and the Community Health Initiative of the Petaluma Area (CHIPA)

We also thank the multiple providers, health care experts, county leaders and residents who participated in interviews, focus groups, and the health need prioritization process to ensure a robust and meaningful needs assessment process.

Research and report development by Harder+Company Community Research.

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I. EXECUTIVE SUMMARY

The Sonoma County Community Health Needs Assessment Collaborative (SC CHNA Collaborative) is dedicated to improving the health of our communities with a dual focus on improving care in our health systems and in collaboration with partners to address key determinants of health in our community. The SC CHNA Collaborative also supports community health interventions, with particular focus on health equity and addressing social determinants of health, including educational attainment, economic wellness, and the built environment.

The 2016 Community Health Needs Assessment (CHNA) offers a comprehensive community health profile that encompasses the conditions that impact health in our county. Conducting a triennial Community Health Needs Assessment (CHNA) is a requirement for not-for-profit hospitals as part of the Patient Protection and Affordable Care Act (ACA).

The CHNA process provides a deep exploration of health in Sonoma County, updating and building upon work done in prior years – including the 2014 Portrait of Sonoma County, a report based on the Human Development Index that examines disparities in health, education and income by place and population in Sonoma County, and the 2013 Community Health Needs Assessment – to identify current priority health needs.

Guided by the understanding that health encompasses more than disease or illness, the 2016 CHNA process continues to utilize a comprehensive framework for understanding health that looks at ways a variety of social, environmental, and economic factors—also referred to as “social determinants” — impact health.

A. Community Health Needs Assessment Background

The goal of the Community Health Needs Assessment is to inform and engage local decision-makers, key stakeholders and the community-at-large in collaborative efforts to improve the health and well-being of all Sonoma County residents. The development of the 2016 CHNA report has been an inclusive and comprehensive process guided by a Core Planning Team and a broadly representative Steering Committee.

Nonprofit hospitals are required to conduct the CHNA in order to maintain their tax exempt status. While many hospitals have conducted CHNAs for many years to identify needs and resources in their communities, these new requirements have provided an opportunity for hospitals to revisit their needs assessment and strategic planning processes with an eye toward enhancing compliance and transparency, and leveraging emerging technologies.

B. Summary of Prioritized Needs

Although Sonoma County is a healthy and affluent county, especially compared to California as a whole, substantial disparities in socioeconomic status and access to opportunity present challenges for the health of Sonoma County residents.

Consideration of the nine health needs that emerged as top concerns in Sonoma County highlights the significance of social determinants of health in building a healthier and stronger community. These results align closely with county priorities and previous findings from the 2013 CHNA process and the Portrait of Sonoma County. In its entirety, this list of health needs supports the work of Health Action to foster collaboration and action among community partners, including key hospital partners, to identify cross-cutting strategies that address multiple health needs. In descending priority order, the following health needs were identified in Sonoma County; additional information about each health need can be found in Appendix A.

- 1. Early Childhood Development:** Child development includes the rapid emotional, social, and mental growth that occurs during gestation and early years of life. Adversities experienced in early

life threaten appropriate development, and may include exposure to poverty; abuse or violence in the home; limited access to appropriate learning materials and a safe, responsive environment in which to learn; or parental stress due to depression or inadequate social support.¹

Exposure to early adversity is pervasive in Sonoma County. Among adults in Sonoma and Napa County (combined for stability), 22.0% report having experienced four or more unique early childhood experiences (ACEs) before age 18 which may including childhood abuse (emotional, physical, and sexual), neglect (emotional and physical), witnessing domestic violence, parental marital discord, and living with substance abusing, mentally ill, or criminal household members.² Key themes among residents and stakeholders included the high cost of living and high cost of child care in Sonoma County, as well as the importance of quality early education and home stability on development among young children.

- 2. Access to Education:** Educational attainment is strongly correlated to health: people with low levels of education are prone to experience poor health outcomes and stress, whereas people with more education are likely to live longer, practice healthy behaviors, experience better health outcomes, and raise healthier children.

In Sonoma County, Kindergarten readiness is used as an early metric to consider disparities in early learning. Third grade reading level is another predictor of later school success; in Sonoma County 43.0% of third grade children are scoring at or above the “Proficient” level on English Language Arts California Standards Test.³ Although only 13.0% of county residents age 25+ have less than a high school diploma, extreme racial disparities exist. Among residents identifying as American Indian/Alaska Native, African American/Black, Hispanic/Latino, Native Hawaiian/Pacific Islander, and Some Other Race, a higher percentage of individuals have less than a high school diploma compared to the total population and compared to White residents.⁴ English Language Learners are also a population of particularly high concern with respect to educational attainment. Only 39.0% of tenth grade English Language Learners passed the California High School Exit Exam in English Language Arts, compared to 86.0% of all tenth grade students in Sonoma County.⁵ Only 55.0% of English Language Learners passed in Mathematics, compared to 87.0% of all Sonoma County tenth graders.⁶ For all students in the county, stakeholders identified the need to increase investment in early childhood education as a pathway to reducing educational disparities and increasing overall academic success.

- 3. Economic and Housing Insecurity:** Economic resources such as jobs paying a livable wage, stable and affordable housing, as well as access to healthy food, medical care, and safe environments can impact access to opportunities to be healthy.

The high cost of living in Sonoma exacerbates issues related to economic security and stable housing. Among renters, 52.4% spend 30% or more of household income on rent.⁷ A lack of affordable housing and a dearth of jobs paying a living wage were identified as key challenges to achieving economic and housing security in the county.

- 4. Oral Health:** Tooth and gum disease can lead to multiple health problems such as oral and facial pain, problems with the heart and other major organs, as well as digestion problems.

¹ Jack P. Shonkoff and Deborah A. Phillips, eds., “From Neurons to Neighborhoods: The Science of Early Childhood Development,” National Research Council and Institute of Medicine, Committee on Integrating the Science of Early Childhood Development, National Academy Press, 2000.

² A Hidden Crisis: Findings on Adverse Childhood Experiences in California, Center for Youth Wellness, 2008-13.

³ California Department of Education, Standardized Testing and Reporting (STAR) Results, 2013.

⁴ US Census Bureau, American Community Survey, 2009-13.

⁵ California Department of Education, 2013-14.

⁶ California Department of Education, 2013-14.

⁷ US Census Bureau, American Community Survey, 2014.

In Sonoma County, oral health is in part affected by lack of access to dental insurance coverage or inadequate utilization of dental care. Among adults, 38.9% do not have dental insurance coverage and may find it difficult to afford dental care.⁸ Among adults 65 years and older, 51.8% do not have dental insurance coverage.⁹ Among adults, 9.2% have poor dental health.¹⁰ In 2014, 51% of kindergarteners and 3rd graders had tooth decay.¹¹ Residents and stakeholders highlighted the lack of dental care providers who accept Denti-Cal, as well as the lack of early prevention of oral health problems, in part due to limited access to affordable preventative care.

- 5. Access to Health Care:** Ability to utilize and pay for comprehensive, affordable, quality physical and mental health care is essential in order to maximize the prevention, early intervention, and treatment of health conditions.

With the implementation of the Affordable Care Act (ACA), many adults in Sonoma County are able to obtain insurance coverage and access regular healthcare. However, disparities persist. Specifically, lower income residents have difficulty accessing care, as many remain uninsured due to high premium costs, and those with public insurance face barriers to finding providers who accept MediCal. Foreign-born residents who are not U.S. citizens also face stark barriers in obtaining insurance coverage and accessing care. While only 10.0% of Sonoma County residents are uninsured, 18.7% of residents earning below 138% of the Federal Poverty Level and 34.2% of foreign-born residents who are not U.S. citizens do not have insurance coverage.¹² Among those who do have insurance coverage, primary data identified other barriers to accessing care including that there are not enough primary healthcare providers in Sonoma County to meet the high demand. Others noted difficulties in navigating the care delivery system in an efficient way.

- 6. Mental Health:** Mental health includes emotional, behavioral, and social well-being. Poor mental health, including the presence of chronic toxic stress or psychological conditions such as anxiety, depression or Post-Traumatic Stress Disorder, has profound consequences on health behavior choices and physical health.

Mental health was raised as a high concern for all residents, especially youth and residents experiencing homelessness. Most notably, Sonoma residents have a high risk of suicide. 12.3 per 100,000 county residents die by committing suicide, compared to 9.8 per 100,000 residents on average in California.¹³ Depression is also a concern, as 31.3% of youth¹⁴ and 14.1% of Medicare beneficiaries¹⁵ are depressed. Residents and stakeholders noted challenges in obtaining mental health care, including that preventative mental health care and screening is limited and that stigma may prevent individuals from seeking professional treatment.

- 7. Obesity and Diabetes:** Weight that is higher than what is considered a healthy weight for a given height is described as overweight or obese.¹⁶ Overweight and obesity are strongly related to stroke, heart disease, some cancers, and Type 2 diabetes.

In Sonoma County, an estimated 25.4% of adults are obese,¹⁷ and 37.9% are overweight.¹⁸ Among youth, 17.5% are obese and 20.0% are overweight.¹⁹ Busy lifestyles and the high cost of living

⁸ Sonoma County Local Health Department File, California Health Interview Survey, 2013-14.

⁹ Ibid.

¹⁰ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES, 2006-10.

¹¹ Sonoma County Smile Survey, 2014.

¹² US Census Bureau, American Community Survey, 2014.

¹³ University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, Death Public Use Data, 2010-12.

¹⁴ California Healthy Kids Survey, 2011-13.

¹⁵ Centers for Medicare and Medicaid Services, 2012.

¹⁶ <http://www.cdc.gov/obesity/adult/defining.html>

¹⁷ California Health Interview Survey, 2014.

¹⁸ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES, 2011-12.

¹⁹ California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-14.

compete with purchasing and cooking healthy food. Lack of physical activity was also noted as a driver of obesity and diabetes, in part due to a lack of affordable exercise options.

8. **Substance Use:** Use or abuse of tobacco, alcohol, prescription drugs, and illegal drugs can have profound health consequences, including increased risk of liver disease, cancer, and death from overdose.²⁰

In Sonoma County, substance abuse was identified as a concern, particularly with respect to alcohol consumption. Among adults, 21.3% of residents report heavy alcohol consumption.²¹ Youth were noted as a high risk population, and data indicates that in the prior 30 days 13.8% of 11th grade students reported using cigarettes, and 28.0% reported using marijuana.²² Additionally, 24.4% of 11th grade students reported ever having driven after drinking.²³

9. **Violence and Unintentional Injury:** Violence and injury is a broad topic that covers many issues including motor vehicle accidents, drowning, overdose, and assault or abuse, among others.

In Sonoma County, the data show that the core issues within this health need are related to domestic violence and violent crime. Among adults, 17.1% self-report having experienced sexual or physical violence by an intimate partner during adulthood.²⁴ The county also has high rates of reported violent crime, including 28.4 incidents of rape per 100,000 population, compared to 21.0 per 100,000 residents on average in California, and 285.7 incidents of assault per 100,000 population, compared to 249.4 per 100,000 in California overall.²⁵

C. Summary of Needs Assessment Methodology and Process

The CHNA process used a mixed-methods approach to collect and compile data to provide a robust assessment of health in Sonoma County. A broad lens in qualitative and quantitative data allowed for the consideration of many potential health needs as well as in-depth analysis. Data sources included:

- Analysis of over 150 health indicators from publicly available data sources such as the California Health Interview Survey, American Community Survey, and the California Healthy Kids Survey. Secondary data were organized by a framework developed from Kaiser Permanente's list of potential health needs, and expanded to include a broad list of needs relevant to Sonoma County.
- Interviews with 21 key stakeholders from the local public health department, as well as leaders, representatives, and members of medically underserved, low-income, minority populations, and those with a chronic disease. Other individuals from various sectors with expertise in local health needs were also consulted.
- Five focus groups were conducted, reaching 64 residents representing different geographic regions in the county, racial/ethnic subpopulations, and age categories.

Data were used to score each health need. Potential health needs were included in the prioritization process if:

- a. At least two distinct indicators reviewed in secondary data demonstrated that the county estimate was greater than 1% "worse" than the benchmark comparison estimate (in most cases, California state average);
- b. Health issue was identified as a key theme in at least eight interviews; and

²⁰ <http://www.cdc.gov/drugoverdose/epidemic/index.html>; <http://www.cdc.gov/alcohol/fact-sheets/womens-health.htm>; <http://www.cdc.gov/alcohol/fact-sheets/mens-health.htm>

²¹ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse, 2006-12.

²² California Healthy Kids Survey, 2011-13.

²³ California Healthy Kids Survey, 2011-13. Survey asks question about "respondent or a friend."

²⁴ California Health Interview Survey, 2009.

²⁵ Federal Bureau of Investigation, FBI Uniform Crime Reports. Additional analysis by the National Archive of Criminal Justice Data. Accessed via the Inter-university Consortium for Political and Social Research, 2010-12.

- c. Health issue was identified as a key theme in at least two focus groups.

The CHNA Core Planning Team with additional hospital representatives was convened on November 20, 2015, to review the health needs identified, discuss the key findings from CHNA, and prioritize top health issues that need to be addressed in the County. The group utilized the Criteria Weighting Method, which enabled consideration of each health area using four criteria: severity; disparities; impact; and prevention.

The CHNA is an important first step towards taking action to effect positive changes in the health and well-being of county residents. Each hospital will develop an implementation strategy for the priority health needs the hospital will address. These strategies will build on their assets and resources, as well as evidence-based strategies, wherever possible. In alignment with the hospital implementation plans, Health Action will use this report for strategic planning and developing cross-sector approaches to address key health needs.

The CHNA, Health Action strategic plans, and the hospital-specific implementation strategies will provide the impetus for concerted action in a strategic, innovative, and equitable way.

II. INTRODUCTION/BACKGROUND

The SC CHNA Collaborative is dedicated to improving the health of our communities with a dual focus on improving care in our health systems and in collaboration with partners to address key determinants of health in our community. Within and amongst health system partners, the SC CHNA Collaborative aims to improve health through high quality care and continuous quality improvement and innovation in the care we deliver, clinical research, workforce development, and health promotion. The SC CHNA Collaborative also supports community health interventions, with particular focus on health equity and addressing social determinants of health, including educational attainment, economic wellness, and the built environment.

Our work in the community takes an equity-based, prevention-focused, evidence-based approach to address multiple determinants of health. We recognize that a healthy community encompasses access to high quality healthcare, access to healthy and nutritious food in neighborhood stores, clean air, access to quality educational opportunities and economically stable and mobile jobs, and safe parks, homes and neighborhoods, among many other factors.

The CHNA process provides a deep exploration of health in Sonoma County, updating and building upon work done in prior years – including the 2014 *Portrait of Sonoma County*, a report based on the Human Development Index that examines disparities in health, education and income by place and population in Sonoma County, and the 2013 Community Health Needs Assessment – to identify current priority health needs.

The current CHNA process considers a broad view of health, closely aligning with the previous work of the *Portrait of Sonoma County*. The *Portrait of Sonoma County* provided findings regarding key vulnerable communities within the county, which strongly informed the primary data collection sampling plans for the current CHNA process in order to better understand the needs of these communities. Many of the needs identified in the 2016 CHNA also align with the 2013 Community Health Needs Assessment priority areas. 2013 health needs that remain salient themes in the 2016 CHNA results include: healthy eating and physical fitness; gaps in access to primary care; access to substance use disorder services; access to mental health services; disparities in education attainment; adverse childhood experiences (ACEs); access to health care coverage; tobacco use; and disparities in oral health.

While the leading causes of death in California remain chronic conditions, evidence indicates that addressing and improving social and environmental conditions will have a positive impact on trends in morbidity and mortality, and diminish disparities in health.²⁶ Many chronic diseases and conditions are caused in part by preventable factors such as poor diet and physical inactivity, and there is growing awareness of the important link between how communities are structured and the opportunities for people to lead safe, active, and healthy lifestyles. Guided by the understanding that health encompasses more than disease or illness, the 2016 CHNA process continues to utilize a comprehensive framework for understanding health that looks at ways a variety of social, environmental, and economic factors—also referred to as “social determinants”—impact health. Thus, the CHNA process identifies top health needs (including social determinants of health) in the community, and analyzes a broad range of social, economic, environmental, behavioral, and clinical care factors that may act as contributing drivers—or contributing risk factors—of each health need.

In addition to considering a broad definition of county-wide health, this assessment explored the particular impact of identified health issues among vulnerable populations which may bear disproportionate risk across multiple health needs. These populations may be residents of particular geographic areas, or may represent particular races, ethnicities, or age groups. In striving towards health equity, the SC CHNA Collaborative placed strong emphasis on the needs of high-risk populations in the process of identifying health needs and as a criterion for prioritization.

The health needs prioritized in the 2016 Community Health Needs Assessment are:

- Early childhood development
- Access to education
- Economic and housing insecurity
- Oral health
- Access to health care
- Mental health
- Obesity and diabetes
- Substance use
- Violence and unintentional injury

With the passage of the Patient Protection and ACA, completion of a CHNA has been codified into the Internal Revenue Code and required to assure not-for-profit hospitals maintain their 501(c)(3) status. The Code requires the CHNA and subsequent documents to include:

- Data research & prioritization of identified health needs
- Report on findings
- Implementation plan

The Sonoma County Department of Health Services (DHS), along with KFH—Santa Rosa, St. Joseph Health—Sonoma County, and Sutter Health, Sonoma County, form the SC CHNA Collaborative, which worked together with partners at Healdsburg District Hospital, Palm Drive Hospital, and Sonoma Valley Hospital on the 2016 CHNA process. Many of the SC CHNA Collaborative partners are also key leaders of Health Action, Sonoma County’s collective impact effort aimed at improving the health of all residents, for which the Department of Health Services provides backbone support.

In order to identify health needs, the SC CHNA Collaborative utilized a mixed-methods approach, examining existing or secondary data sources, as well as speaking to community leaders and residents, to understand key health issues in Sonoma County. The SC CHNA Collaborative and the consulting team reviewed secondary data available through the Kaiser Permanente CHNA data

²⁶ Centers for Disease Control and Prevention (CDC). CDC Health Disparities and Inequalities Report — United States, 2013. MMWR. Morbidity and Mortality Weekly Report Vol. 62, No. 3. Retrieved from <http://www.cdc.gov/mmwr/pdf/other/su6203.pdf>.

platform and compiled additional data from national, statewide, and local sources to provide a more complete picture of health in Sonoma County. These data were compared to benchmark data and analyzed to identify potential areas of need. In addition, the consulting team collected and analyzed primary data about issues that most impact the health of the community, as well as existing resources and new ideas to address those needs, from community members and local experts across sectors (e.g., public health, education, and government). The scored quantitative data and coded qualitative data were triangulated to identify the top health needs in the county. Once these health needs were identified, a cross-sector group of stakeholders reviewed summarized data in health need profiles (see Appendix A) and prioritized the health needs based on criteria identified by the SC CHNA Collaborative. The resulting prioritized community health needs are presented in this report.

III. BACKGROUND ON CHNA STEERING COMMITTEE MEMBERS

The following partner hospitals and organizations have worked closely together throughout the CHNA to ensure the report complied with the requirements of the Affordable Care Act and included data to inform the development of effective implementation strategies.

A. About Kaiser Permanente

Founded in 1942 to serve employees of Kaiser Industries and opened to the public in 1945, Kaiser Permanente is recognized as one of America's leading health care providers and nonprofit health plans. They were created to meet the challenge of providing American workers with medical care during the Great Depression and World War II, when most people could not afford to go to a doctor. Since their beginnings, they have been committed to helping shape the future of health care. Among the innovations Kaiser Permanente has brought to U.S. health care are:

- Prepaid health plans, which spread the cost to make it more affordable
- A focus on preventing illness and disease as much as on caring for the sick
- An organized coordinated system that puts as many services as possible under one roof—all connected by an electronic medical record

Kaiser Permanente is an integrated health care delivery system comprised of Kaiser Foundation Hospitals (KFH), Kaiser Foundation Health Plan (KFHP), and physicians in the Permanente Medical Groups. Today they serve more than 10 million members in nine states and the District of Columbia. Their mission is to provide high-quality, affordable health care services and to improve the health of their members and the communities we serve.

Care for members and patients is focused on their total health and guided by their personal physicians, specialists, and team of caregivers. Their expert and caring medical teams are empowered and supported by industry-leading technology advances and tools for health promotion, disease prevention, state-of-the-art care delivery, and world-class chronic disease management. Kaiser Permanente is dedicated to care innovations, clinical research, health education, and the support of community health.

B. About Kaiser Permanente Community Benefit

For more than 70 years, Kaiser Permanente has been dedicated to providing high-quality, affordable health care services and to improving the health of their members and the communities they serve. They believe that good health is a fundamental right shared by all and they recognize that good health extends beyond the doctor's office and the hospital. It begins with healthy environments: fresh fruits and vegetables in neighborhood stores, successful schools, clean air, accessible parks, and safe playgrounds. These are the vital signs of healthy communities. Good health for the entire community, which they call Total Community Health, requires equity as well as social and economic well-being.

Like their approach to medicine, Kaiser Permanente's work in the community takes a prevention-focused, evidence-based approach. They go beyond traditional corporate philanthropy or grantmaking to pair financial resources with medical research, physician expertise, and clinical practices.

Historically, they have focused their investments in three areas—Health Access, Healthy Communities, and Health Knowledge—to address critical health issues in our communities.

For many years, they have worked side-by-side with other organizations to address serious public health issues such as obesity, access to care, and violence. They have conducted Community Health Needs Assessments to better understand each community's unique needs and resources. The CHNA process informs their community investments and helps them develop strategies aimed at making long-term, sustainable change—and it allows them to deepen the strong relationships they have with other organizations that are working to improve community health.

C. About Sutter Health, Sonoma County

The legacy of Sutter Santa Rosa Regional Hospital started in 1867, as a small community hospital on the corner of Humboldt and Cherry streets in Santa Rosa. Heeding cries to move the facility outside of city limits, the County of Sonoma purchased land just north of town and built a hospital on Chanate Road in 1936. A new wing was added to modernize the facility in 1956 and further expansion included a four-story wing, increasing the hospital's capacity. In 1996, Sutter Health agreed to improve the aging County medical center, expand services and ultimately build a modern replacement hospital that met new earthquake safety standards.

Sutter Santa Rosa Regional Hospital fulfills that promise and provides state-of-the-art health care for the region. The new facility—which opened in fall of 2014—is located at 30 Mark West Springs Road and is accredited by the Joint Commission and consistently ranks among the top hospitals in the region according to independent quality rating organizations.

Sutter Santa Rosa Regional Hospital is part of Sutter Health, a not-for-profit network of hospitals, doctors and nurses who share expertise and resources to advance health care quality. Other Sutter affiliates in Sonoma County include Sutter Pacific Medical Foundation, Sutter Care At Home, and Sutter Health Plus (Sutter Health's new insurance plan), all working together to ensure a high quality, patient-centered continuum of care.

Sutter Santa Rosa Regional Hospital is licensed by the State of California Department of Health Services to operate 84 acute care beds and is accredited by the Joint Commission on the Accreditation of Healthcare Organizations (JCAHO) and the California Medical Association.

Sutter Health is committed to giving back to the community in response to identified health priorities. In 2015, the quantifiable value of the community benefit programs provided or supported by Sutter Santa Rosa Regional Hospital (SSRRH) was \$21,489,285 which includes nearly \$1.7 million in charity care write-offs to uninsured people who receive care in the Emergency Department or hospital and nearly \$8 million in unreimbursed costs of care for patients on public programs.

The most significant community benefit program is their Family Medicine Residency Training Program. This three year program graduates twelve primary care physicians each year, about half of whom stay and practice in their community. Also, about 75% of the local Federally Qualified Health Centers are staffed by graduates of the program.

D. About St. Joseph Health—Sonoma County

St. Joseph Health—Sonoma County (SJH—SC), founded by the Sisters of St. Joseph of Orange, has been serving the healthcare needs of families in the community for more than 60 years. Part of a statewide network of hospitals and clinics known as SJH—SC operates two hospitals, urgent care and community clinics, hospice, home health services, and other facilities for treating the healthcare needs of the community in Sonoma County and the region. Its core facilities are Petaluma Valley Hospital, an 80—bed acute care hospital, and Santa Rosa Memorial Hospital (SRM), a full service 289—bed acute care hospital that includes a Level II trauma center for the coastal region that extends from San Francisco to the Oregon border.

As a values-based organization, St. Joseph Health has a long—standing commitment to the communities it serves. SJH works under the premise of “Value Standards.” SJH Value Standard Seven (Community Benefit) states: “We commit resources to improving the quality of life in the communities we serve, with special emphasis on the needs of the poor and underserved.” Ten percent of the net income is dedicated to community benefit. In Sonoma County, SRM’s Community Benefit Department integrates actions through Strategic Elements that address the political, social, behavioral and physiological determinants of health: Healthy Communities, Community Health and Advocacy. The primary strategies employed to address community needs are community capacity building, improving health outcomes for vulnerable populations, and reducing social isolation of special populations.

Community Benefit programs and clinics include: Neighborhood Care Staff community organizing program, Agents of Change Training in Our Neighborhoods leadership training, Circle of Sisters after-school program, St. Joseph Mobile Health Clinic, House Calls/Home Sweet Home, Promotores de Salud health promotion program, St. Joseph Dental Clinic, Cultivando la Salud Mobile Dental Clinic, and Mighty Mouth dental disease prevention program. Given the changing context for its work, SJH, Petaluma Valley Hospital anticipates the need for a flexible approach in its response to community needs. For example, certain community health needs may become more pronounced and require changes to the initiatives identified by SRM in the Community Benefit Plan/Implementation Strategy.

E. About Palm Drive Health Care District

The Palm Drive Health Care District was formed in April 2000 and is a government entity of the State of California. It serves 50,000 people who live in western Sonoma County, including the communities of: Sebastopol, Graton, Forestville, Bodega Bay, Carmet, Salmon Creek, Jenner, Duncan’s Mills, Guerneville, Occidental, Freestone, Rio Nido, Monte Rio, Guernewood Park, Summerhome, and Mirabel Park.

The District’s primary mission is to deliver access to quality, compassionate health services responsive to the needs of the District. The district fulfills this mission through ownership of Sonoma West Medical Center (formerly Palm Drive Hospital), and through partnerships with community-based providers of health and wellness information, classes, services, and other programs. The vision of the district is to improve the health of our diverse west county populations through engagement with these populations. The values that the district holds in pursuing its mission and vision are integrity, leadership, caring and perseverance.

F. About Sonoma Valley Hospital

Sonoma Valley Hospital is a 75-bed, full-service acute care district hospital with an outstanding staff of health care professionals located in the City of Sonoma and serving the entire Sonoma Valley. In 2016, the Sonoma Valley Health Care District is celebrating its 70th anniversary. Recently, the Hospital completed an extensive renovation that included the addition of a new wing housing a state-of-the-art Emergency Department and Surgery Center.

Sonoma Valley Hospital has a strong commitment to the communities they serve. In recent years, they have developed extensive outreach programs, many in partnership with other Sonoma Valley organizations, which reinforce their mission to maintain, improve and restore the health of everyone in their District. They also offer a wellness program that promotes improved health and wellbeing both in the Hospital and the community.

Sonoma Valley Hospital services encompass the whole spectrum of health care needs, and their medical treatment extends to all but the most specialized issues. They are different from many hospitals in that they have a Skilled Nursing Facility and a Skilled Home Health Care service. They also provide Outpatient Rehabilitation and Outpatient Diagnostic services.

G. About Health Action

Health Action is a partnership of local leaders, organizations and individuals committed to creating a healthier community through collective action. The Sonoma County Department of Health Services (DHS) convened Health Action in 2007 as a catalyst to improve the health of the community. Recognizing that large-scale social change would require significant cross-sector coordination and collaboration, Health Action set out with the following goals:

- Engage a broad spectrum of stakeholders to lead a community dialogue about community health issues
- Enrich the collective understanding of local health issues and solutions
- Create a shared vision for community health improvement based on the multiple determinants of health
- Offer leadership to develop and implement initiatives and policies to create a healthy community

Health Action's vision is that, by the year 2020, Sonoma County is a healthy place to live, work and play: a place where people thrive and achieve their life potential. Health Action mobilizes community partnerships and resources to focus on opportunities for action that are most likely to improve health status and health equity.

The goal of the current Health Action Plan (2013-2016) is to foster collaboration and bold action across three broad priorities of educational attainment, economic wellness and health system improvement. A Council of key community leaders, three cross-sector subcommittees focused on the priority areas, and a network of place-based Health Action Chapters are charged with understanding key needs, planning to establish outcomes and strategies to improve health, and directing investments, program strategy and policy toward meeting those outcomes. The three sub-committees are:

- Educational Attainment: New planning and mobilization to increase educational attainment in Sonoma County
- Strengthening Primary Care and Coordination of Care across the continuum of local providers: A continuation and expansion of the work of the Primary Care Workgroup, an ad hoc workgroup of Health Action
- Economic Security: Strategic support of current efforts to assure that community members have sufficient income and the ability to have control of their life situation

H. Purpose of the Community Health Needs Assessment Report

The Patient Protection and Affordable Care Act (ACA), enacted on March 23, 2010, included new requirements for nonprofit hospitals in order to maintain their tax exempt status. The provision was the subject of final regulations providing guidance on the requirements of section 501(r) of the Internal Revenue Code. Included in the new regulations is a requirement that all nonprofit hospitals must conduct a community health needs assessment and develop an implementation strategy (IS) every three years (<http://www.gpo.gov/fdsys/pkg/FR-2014-12-31/pdf/2014-30525.pdf>). The required written IS plan is set forth in a separate written document. Both the CHNA Report and the IS for each hospital is publically available on hospital websites following board approval.

I. Sonoma County's Approach to Community Health Needs Assessment

The new federal CHNA requirements have provided an opportunity to revisit our needs assessment and strategic planning processes with an eye toward enhanced compliance and transparency, and leveraging emerging technologies. Our intention is to develop and implement a rigorous, collaborative approach to understanding the needs and assets in our communities.

The SC CHNA Collaborative's approach to the needs assessment includes the use of Kaiser Permanente's free, web-based CHNA data platform that is available to the public. The data platform provides access to a core set of approximately 150 publicly available indicators to understand health

through a framework that includes social and economic factors; health behaviors; physical environment; clinical care; and health outcomes.

In addition to reviewing the secondary data available through the Kaiser Permanente CHNA data platform, and other sources of secondary data, the SC CHNA Collaborative collected primary data through key informant interviews and focus groups. Primary data collection consisted of reaching out to local health experts, community leaders, and residents to identify issues that most impacted the health of the community. The CHNA process also included an identification of existing community assets and resources to address the health needs.

The SC CHNA Collaborative developed a set of criteria to determine what constituted a health need in their community. Once all of the community health needs were identified, they were all prioritized based on identified criteria. This process resulted in a complete list of prioritized community health needs. The process and the outcome of the CHNA are described in this report.

In conjunction with this report, each hospital will develop an implementation strategy for the priority health needs the hospital will address. These strategies will build on the hospital's assets and resources, as well as on evidence-based strategies, wherever possible. The Implementation Strategy will be filed with the Internal Revenue Service using Form 990 Schedule H. Both the CHNA and the Implementation Strategy, once finalized, will be posted publicly on all hospital websites. In alignment with the hospital implementation plans, Health Action will use this report for strategic planning and developing cross-sector approaches to address key health needs.

IV. COMMUNITY SERVED

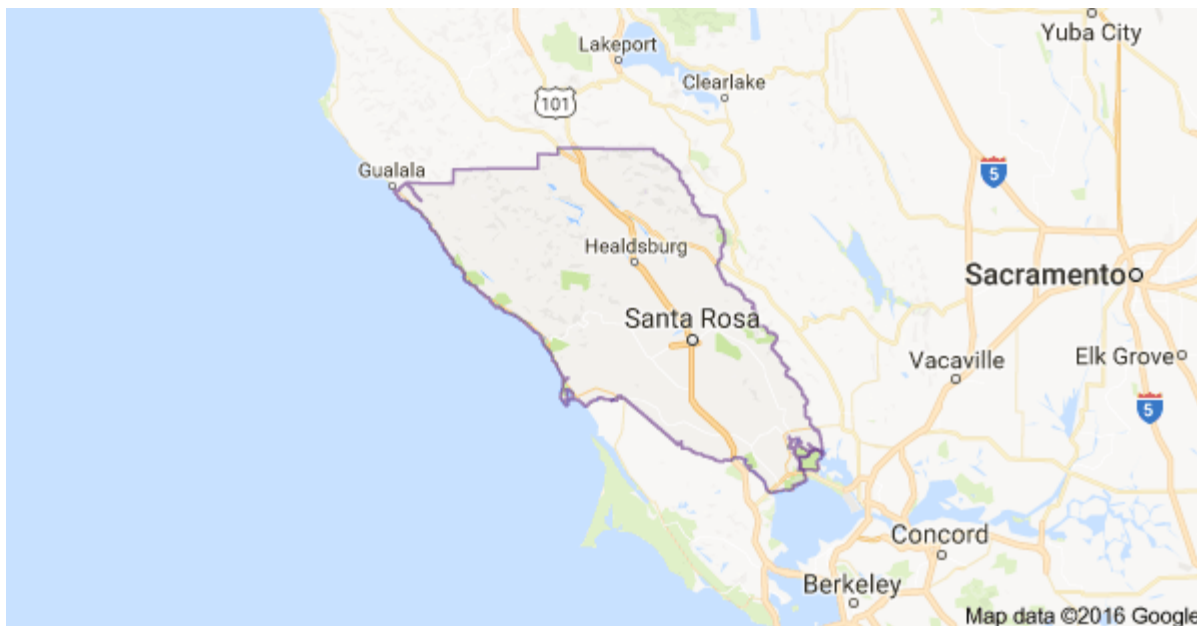
In order to determine the health needs of the SC CHNA Collaborative's member hospital service areas, it is first important to understand the communities of interest. The following section describes the service area community by geography, demographics, and socioeconomic indicators, as well as indicators of overall health, and climate and the physical environment.

A. Definition of Community Served

Each primary hospital in the SC CHNA Collaborative defines the community served by a hospital as those individuals residing within its hospital service area. A hospital service area includes all residents in a defined geographic area surrounding the hospital and does not exclude low-income or underserved populations.

B. Map and Description of Community Served

i. Map



ii. Geographic Description of the Communities Served

Sutter Health, Sonoma County service area is Sonoma County.

St. Joseph Health—Sonoma County primary service area includes the cities of Santa Rosa, Sebastopol, Windsor, Forestville, Rohnert Park, and Cotati/Penngrrove. The secondary service area includes all of Sonoma County, Ukiah to the north of Mendocino County, and northern Marin County to the south. The hospital is home to the region's Level II Trauma Center serving the entire Coastal Valleys area, including Sonoma, Napa, Mendocino and Lake Counties, as well as coastal Marin County.

The KFH—Santa Rosa service area includes most of Sonoma County, except for a small southern portion of Sonoma County in KFH—San Rafael's service area that includes the city of Petaluma, and a small section of Napa County. Cities in this area include Cloverdale, Cotati, Healdsburg, Rohnert Park, Santa Rosa, Sebastopol, Sonoma, and Windsor.

Using the Kaiser Permanente Data Platform, a comparison was done between Sonoma County and these service areas. No notable differences in health status exist, so for the purpose of this assessment all hospitals in the SC CHNA Collaborative consider the service area to be Sonoma County.

iii. Demographic Profile

The following data provide an overall picture of the Sonoma County population. Demographic and socioeconomic data present a general profile of residents, while overall health indicators present an assessment of the health of the county. Key drivers of health (e.g., healthcare insurance, education, and poverty) illuminate important upstream conditions that affect the health of Sonoma County today and into the future. Finally, climate and physical environment indicators complement these socioeconomic indicators to provide a comprehensive understanding of the determinants of health in Sonoma County. All indicators include California comparison data as a benchmark to determine disparities between Sonoma County and the state. Healthy People 2020 benchmarks are also included when available.

Sonoma County and California Demographic and Socioeconomic Data ²⁷		
Indicator	Sonoma County	California
<i>Demographic and Socioeconomic Information</i>		
Total Population	487,469	37,659,181
Median Age	40.2 years	35.4 years
Under 18 Years Old	25.3%	24.5%
65 Years and Older	14.7%	11.5%
White	80.0%	62.3%
Hispanic/Latino	25.2%	37.9%
Some Other Race	9.2%	12.9%
Asian	4.0%	13.3%
Multiple Races	3.6%	4.32%
Black	1.6%	6.0%
Native American/ Alaskan Native	1.3%	0.8%
Pacific Islander/ Native Hawaiian	0.4%	0.4%
Median Household Income ²⁸	\$67,771	\$61,933
Unemployment ²⁹	5.0%	6.8%
Linguistically Isolated Households	5.6%	10.3%
Renters Spending ≥30% of Household Income on Rent ³⁰	52.4%	53.8%

Although Sonoma County is a healthy and affluent county, especially compared to California as a whole, substantial disparities in socioeconomic status and access to opportunity present challenges for the health of Sonoma County residents. The *Portrait of Sonoma County* assessed overall health in the county as well as explored notable geographic disparities. For example, the *Portrait of Sonoma County* identified that life expectancies in the top and bottom census tracts vary by an entire decade. The top five tracts are Central Bennett Valley (85.7 years), Sea Ranch/Timber Cove and Jenner/Cazadero (both 84.8 years), Annadel/South Oakmont and North Oakmont/Hood Mountain (both 84.3 years), and West Sebastopol/Graton (84.1 years). Other areas have far lower life expectancies, including Bicentennial Park (77.0 years), Sheppard (76.6 years), Burbank Gardens (76.0 years), Downtown Santa Rosa (75.5 years), and Kenwood/Glen Ellen (75.2 years). Higher life expectancy was correlated with higher educational attainment and enrollment. This and other indications of health disparity in Sonoma County informed areas of high need to be considered most closely in the CHNA process.

²⁷ Unless noted otherwise, all data presented in this table is from the US Census Bureau, 2009-2013 American Community Survey 5-Year Estimate.

²⁸ US Census Bureau, 2014 American Community Survey.

²⁹ US Department of Labor, Bureau of Labor Statistics, June 2015.

³⁰ US Census Bureau, 2014 American Community Survey.

Sonoma County and California Health Profile Data ³¹			
Indicator	Sonoma County	California	HP 2020 Benchmark ³²
<i>Overall Health</i>			
Diabetes Prevalence (Age-Adjusted) ³³	6.0%	8.1%	—
Adult Asthma Prevalence ³⁴	19.8%	14.2%	—
Adult Heart Disease Prevalence ³⁵	7.6%	6.3%	—
Poor Mental Health ³⁶	15.2%	15.9%	—
Adults with Self-Reported Poor or Fair Health (Age-Adjusted) ³⁷	22.0%	18.4%	—
Adult Obesity Prevalence (BMI > 30) ³⁸	25.4%	27.0%	≤ 30.5%
Child Obesity Prevalence (Grades 5, 7, 9) (BMI>30) ³⁹	17.5%	19.0%	≤ 16.1%
Adults with a Disability ⁴⁰	29.6%	28.5%	—
Infant Mortality Rate (per 1,000 births) ⁴¹	4.2	5.0	≤ 6.0
All-Cancer Mortality Rate (Age-Adjusted) (per 100,000 pop.) ⁴²	159.1	151.0	≤ 161.4
<i>Key Drivers of Health</i>			
Living in Poverty (<200% FPL)	29.3%	35.9%	—
Children in Poverty (<100% FPL) ⁴³	12.8%	22.7%	—
Age 25+ with No High School Diploma ⁴⁴	13.2%	18.5%	—
High School Graduation Rate ⁴⁵	81.6	80.4%	≥ 82.4%
3 rd Grade Reading Proficiency ⁴⁶	43.0%	45.0%	—
Percent of Population Uninsured	14.1%	17.8%	—
Percent of Insured Population Receiving Medi-Cal/Medicaid ⁴⁷	18.2%	14.0%	—
<i>Climate and Physical Environment</i>			
Days Exceeding Particulate Matter 2.5 (Pop. Adjusted) ⁴⁸	5.6%	4.2%	—
Days Exceeding Ozone Standards (Pop. Adjusted) ⁴⁹	0.0%	2.5%	—
Weeks in Drought ⁵⁰	92.7%	92.8%	—
Total Road Network Density (Road Miles per Acre) ⁵¹	1.9	4.3	—
Pounds of Pesticides Applied ⁵²	2,172,032	193,597,806	—
Population within Half Mile of Public Transit ⁵³	12.1%	15.5%	—

³¹ Unless noted otherwise, all data presented in this table is from the US Census Bureau, 2009-2013 American Community Survey 5-Year Estimate.

³² Whenever available, Healthy People 2020 Benchmarks are provided. Healthy People 2020. Washington, DC: U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion.

³³ Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2012.

³⁴ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional analysis by CARES, 2011-2012.

³⁵ California Health Interview Survey, 2011-2012.

³⁶ California Health Interview Survey, 2013-2014; Indicator is adults needing to see a professional because of problems with mental health, emotions, nerves, or use of alcohol or drugs.

³⁷ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US Department of Health & Human Services, Health Indicators Warehouse, 2006-2012.

³⁸ Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2012.

³⁹ California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-2014.

⁴⁰ California Health Interview Survey, 2014.

⁴¹ Centers for Disease Control and Prevention, National Vital Statistics System. Accessed via CDC WONDER. Centers for Disease Control and Prevention, Wide-Ranging Online Data for Epidemiologic Research, 2006-2010.

⁴² California Department of Public Health, 2011-13.

⁴³ US Census Bureau, 2014 American Community Survey 1-Year Estimate.

⁴⁴ US Census Bureau, 2010-2014 American Community Survey 5-Year Estimate.

⁴⁵ California Department of Education, 2013.

⁴⁶ Standardized Testing and Reporting (STAR) Results, 2010-11 and 2012-13, from California Department of Education, Accessed via kidsdata.org, 2013.

⁴⁷ US Census Bureau, 2014 American Community Survey 1-Year Estimate.

⁴⁸ Centers for Disease Control and Prevention, National Environmental Public Health Tracking Network, 2008.

⁴⁹ Centers for Disease Control and Prevention, National Environmental Public Health Tracking Network, 2008.

⁵⁰ US Drought Monitor, 2012-2014.

⁵¹ Environmental Protection Agency, EPA Smart Location Database, 2011.

⁵² California Department of Pesticide Regulation (CDPR), 2013.

⁵³ Environmental Protection Agency, EPA Smart Location Database, 2011.

V. COLLABORATIVE PARTNERS

The Sonoma County CHNA was a collaborative effort that included not only Sonoma's hospitals but also partner organizations and individuals throughout the community who worked alongside consultants to collect and analyze data and ultimately produce this report.

A. Institutions That Collaborated on the Assessment

Sonoma County's primary hospitals (KFH—Santa Rosa, St. Joseph Health—Sonoma County, Sutter Health) worked in collaboration to complete a county-wide CHNA. Representatives from these institutions, joined by representatives from Sonoma County Department of Health Services, formed the 2016 Sonoma County Community Health Needs Assessment Collaborative. The SC CHNA Collaborative was supported by partners from Sonoma County District Hospitals, including Healdsburg Health District, Palm Drive Health Care District, and Sonoma Valley Hospital.

B. Identity and Qualifications of Consultants Used to Conduct the Assessment

- **Harder+Company Community Research:** Harder+Company Community Research (Harder+Company) is a comprehensive social research and planning firm with offices in San Francisco, Sacramento, Los Angeles, and San Diego. Harder+Company works with public sector, nonprofit, and philanthropic clients nationwide to reveal new insights about the nature and impact of their work. Through high-quality, culturally-based evaluation, planning, and consulting services, Harder+Company helps organizations translate data into meaningful action. Since 1986, Harder+Company has worked with health and human service agencies throughout California and the country to plan, evaluate, and improve services for vulnerable populations. The firm's staff offers deep experience assisting hospitals, health departments, and other health agencies on a variety of efforts – including conducting needs assessments; developing and operationalizing strategic plans; engaging and gathering meaningful input from community members; and using data for program development and implementation. Harder+Company offers considerable expertise in broad community participation which is essential to both healthcare reform and the CHNA process in particular. Harder+Company is also the consultant on several other CHNAs throughout the state including in Napa, San Joaquin, and Marin County.

VI. PROCESS AND METHODS USED TO CONDUCT THE CHNA

The SC CHNA Collaborative used a mixed-methods approach to collect and compile data to provide a robust assessment of health in Sonoma County. A broad lens of qualitative and quantitative data allowed for the consideration of many potential health needs as well as in-depth analysis. The following section outlines the data collection and analysis methods used to conduct the CHNA.

A. Secondary Data

i. Sources and dates of secondary data used in the assessment

The SC CHNA Collaborative used the Kaiser Permanente (KP) CHNA Data Platform (www.chna.org/kp) to review over 150 indicators from publicly available data sources. Additional secondary data were compiled and reviewed from existing sources including California Health Interview Survey, American Community Survey, and California Healthy Kids Survey, among other sources. Where more recent data were readily available and current estimates were critical to assessing changing landscapes such as health insurance status, Kaiser Permanente CHNA Data Platform information was replaced with new data as it was publicly released, to reflect more recent data. In addition to statewide and national survey data, previous CHNAs and other relevant external reports were reviewed to identify additional existing data on additional indicators at the county level. For details on the specific source and years for each indicator reported, please see Appendix B.

ii. Methodology for collection, interpretation and analysis of secondary data

Secondary data were considered in broad areas of potential health needs. The list of potential health needs considered in this process was developed from Kaiser Permanente's list of potential health needs, which was based on the most commonly identified health needs from the 2013 CHNA cycle, and expanded to include other needs relevant to Sonoma County. The consulting team and SC CHNA Collaborative finalized this framework in advance of analysis.

Where available, Sonoma County data were considered alongside relevant benchmarks including California state average, Healthy People 2020, and the United States average. Each indicator was compared to a relevant benchmark, most often the California state average. If no appropriate benchmark was available, the indicator could not be considered in criteria to identify health needs, but is presented in the final data book (Appendix B) and was used to provide supplementary information about identified health needs. In areas of particular health concern, data were also collected at smaller geographies, where available, to allow for more in-depth analysis and identification of community health issues. Data on gender and race/ethnicity breakdowns were analyzed for key indicators within each broad health need where subpopulation estimates were available.

B. Community Input

i. Description of the community input process

Community input was provided by a broad range of community members and leaders through key informant interviews and focus groups.

Individuals identified by the SC CHNA Collaborative as having valuable knowledge, information, and expertise relevant to the health needs of the community were interviewed. Interviewees included representatives from the local public health department, as well as members of medically underserved, low-income, chronically diseased, and minority populations. Other individuals from various sectors with expertise of local health needs were also consulted. A total of 21 key informant interviews were conducted during this needs assessment. For a complete list of individuals who provided input, see Appendix C.

Additionally, five focus groups were conducted throughout Sonoma County, reaching 64 residents. These groups were intentionally sampled to reach residents in specific geographic regions identified as areas of high concern in the *Portrait of Sonoma County* report. These subpopulations included residents in Petaluma, the Boyes Hot Springs in Sonoma Valley, Cloverdale, Roseland in Southwest Santa Rosa, and the Russian River area. Focus groups were monolingual, and the language of facilitation was selected to encourage participation from the target population for each conversation. The SC CHNA Collaborative worked closely with community organizations to ensure that the location and language of facilitation selected was appropriate and convenient for residents in each community. Groups in Cloverdale and the Boyes Hot Springs in Sonoma Valley were conducted in Spanish; all others were conducted in English.

Community partners provided invaluable assistance in recruiting and enrolling focus group participants. Many individuals who participated in focus groups identified as leaders, representatives, or members of medically underserved, low-income, chronically diseased, and minority populations. For more information about specific populations reached in focus groups, see Appendix C.

ii. Methodology for collection and interpretation of qualitative data

Interview and focus group protocols were developed by the consulting team and reviewed by the SC CHNA Collaborative, and were designed to inquire about top health needs in the community, as well as a broad range of social, economic, environmental, behavioral, and clinical care factors that

may act as contributing drivers of each health need. For more information about data collection protocols, see Appendix D.

All qualitative data were coded and analyzed using ATLAS.ti software. A codebook with robust definitions was developed to code transcripts for information related to each potential health need, as well as to identify comments related to specific drivers of health needs, subpopulations or geographic regions disproportionately affected, existing assets or resources, and community recommendations for change. At the onset of analysis, one interview transcript and one focus group transcript were coded by the entire analysis team to ensure inter-coder reliability and minimize bias.

Transcripts were analyzed to examine the health needs identified by the interviewee or group participants. Health need identification in qualitative data was based on the number of interviewees or groups who referenced each health need as a concern, regardless of the number of mentions of that particular health need within each transcript.

C. Written Comments

Sutter Health provided the public an opportunity to submit written comments on the facility's previous CHNA Report through *our website at http://www.suttersantarosa.org/relations/community_benefits.html*. This website will continue to allow for written community input on the facility's most recently conducted CHNA Report.

As of the time of this CHNA report development, Sutter Santa Rosa Regional Hospital had not received written comments about previous CHNA Reports. Sutter will continue to track any submitted written comments and ensure that relevant submissions will be considered and addressed by the appropriate Facility staff.

D. Data Limitations and Information Gaps

The Kaiser Permanente CHNA data platform includes approximately 150 secondary indicators that provide timely, comprehensive data to identify the broad health needs faced by a community. While changes to the platform are ongoing, the data presented in this report reflect estimates presented on the Kaiser Permanente CHNA data platform on December 2, 2015. Supplementary secondary data were obtained from reliable data platforms including U.S. Census Bureau American FactFinder, AskCHIS, and others. However, as with any secondary data estimates, there are some limitations with regard to this information. With attention to these limitations, the process of identifying health needs was based on triangulating primary data and multiple indicators of secondary data estimates. The following considerations may result in unavoidable bias in the analysis:

- Some relevant drivers of health needs could not be explored in secondary data because information was not available—for example, only limited information was available about the rising cost of housing and increasing pressures of gentrification.
- Many data were available at only a county level, making an assessment of health needs at a neighborhood level challenging. Furthermore, disaggregated data around age, ethnicity, race, and gender are not available for all data indicators, limiting the ability to examine disparities of health within the community. For a more in-depth analysis of sub-county data, please see the *Portrait of Sonoma County* report.
- In all cases where secondary data estimates by race/ethnicity are reported, the categories presented reflect those collected by the original data source, which yields inconsistencies in racial labels within this report.
- For some county level indicators, data are available but reported estimates are statistically unstable; in this case estimates are reported but instability is noted.

- Secondary data are subject to differences in rounding from different data sources: i.e., Kaiser Platform indicators are rounded to the nearest hundredth, whereas other data sources report only to the nearest tenth or whole number.
- Data are not always collected on a yearly basis, meaning that some data estimates are several years old and may not reflect the current health status of the population. In particular, data reported from prior to 2013 should be treated cautiously in planning and decision-making.
- California state averages and, where available, United States national averages and Healthy People 2020 goals are provided for context. No analysis of statistical significance was done to compare county data to a benchmark; thus, these benchmarks are intended to provide contextual guidance and do not intend to imply a statistically significant difference between county and benchmark data.

Primary data collection and the prioritization process are also subject to information gaps and limitations. The following limitations should be considered in assessing validity of the primary data:

- Themes identified during interviews and focus groups were likely subject to the experience of individuals selected to provide input; the SC CHNA Collaborative sought to receive input from a robust and diverse group of stakeholders to minimize this bias.
- The final prioritized list of health needs is also subject to the affiliation and experience of the individuals who attended the Prioritization Day event, and to how those individuals voted on that particular day. The closeness in priority scores suggests that all identified health needs are of importance to stakeholders in Sonoma County. While a priority order has been established during this needs assessment process, narrow differences in the results highlight the importance of directing attention and resources to each identified resource to the extent possible.

In order to minimize the effect of potential biases on the results of this needs assessment, the SC CHNA Collaborative considered data from multiple sources, and triangulated primary and secondary data to identify health needs in Sonoma County and to ensure that the results of this analysis are useful and relevant to Sonoma County planning.

VII. IDENTIFICATION AND PRIORITIZATION OF THE COMMUNITY’S HEALTH NEEDS

A. Identifying Community Health Needs

i. Definition of “health need”

For the purposes of the CHNA, the SC CHNA Collaborative defines a “health need” as a health outcome and/or the related conditions that contribute to a defined health need. In this context, potential health needs are intended to identify a condition or related set of conditions, rather than a specific population of high need. Within each health need, populations of high risk are explored. For this reason, information about needs of specific at-risk subpopulations such as older adults is included within the context of the health needs. Health needs are identified by the comprehensive identification, interpretation, and analysis of a robust set of primary and secondary data.

A total of 19 potential health needs were examined, as outlined in the table below.

Health Need	Definition
Access to Care	Data related to health insurance, care access, and preventative care utilization for physical, mental, and oral health
Access to Housing	Data related to cost, quality, availability, and access to housing

Access to Education	Data related to educational attainment and academic success, from preschool through post-secondary education
Asthma and COPD	Known drivers of asthma and other respiratory diseases, and health outcomes related to these conditions
Cancers	Known drivers of cancers, and health outcomes related to cancers
Climate and Health	Data related to climate and environment, and related health outcomes
CVD and Stroke	Known drivers of heart disease and stroke, and related cardiovascular health outcomes
Early Child Development	Data related to development of mental and emotional health in young children, particularly age 0-5, including information about early learning and adverse experiences in early childhood
Economic Security	Data related to economic well-being, food insecurity, and drivers of poverty including educational attainment
HIV/AIDS/STD	Known drivers of sexually transmitted infections including HIV, and related STD and AIDS outcomes
Mental Health	Data related to mental health and well-being, access to and utilization of mental health care, and mental health outcomes
Obesity and Diabetes	Data related to healthy eating and food access, physical fitness and active living, overweight/obesity prevalence, and downstream health outcomes including diabetes
Oral Health	Data related to access to oral health care, utilization of oral health preventative services, and oral health disease prevalence
Overall Health	Data related to overall community health including self-rated health and all-cause mortality
Pregnancy and Birth Outcomes	Data related to behaviors, care, and outcomes occurring during gestation, birth, and infancy; includes health status of both mother and infant
Substance Abuse and Tobacco	Data related to all forms of substance abuse including alcohol, marijuana, tobacco, illegal drugs, and prescription drugs
Vaccine-Preventable Infectious Disease	Data related to vaccination rates and prevalence of vaccine-preventable disease
Violence and Injury	Data related to intended and unintended injury such as violent crime, motor vehicle accidents, domestic violence, and child abuse
Youth Growth and Development	Data related to supports and outcomes affecting youth ability to develop to full potential as adults, particularly focused on adolescent youth

ii. Criteria and analytical methods used to identify the community health needs

To identify the list of community health needs for Sonoma County, all secondary data were scored against a benchmark, in most cases the California state estimate, and a score was applied to each potential health need based on the aggregate score of the indicators assigned to that health need.

Additionally, content analysis was used to analyze key themes in both the Key Leader Interviews and Focus Groups. Section V contains more information on quantitative and qualitative data analysis.

Potential health needs were identified as a health need in the county if:

- d. At least two distinct indicators reviewed in secondary data demonstrated that the county estimate was greater than 1% “worse” than the benchmark comparison estimate (in most cases, California state average);
- e. Health issue was identified as a key theme in at least eight interviews; and
- f. Health issue was identified as a key theme in at least two focus groups.

If a health need was mentioned overwhelmingly in primary data but did not meet the criteria for secondary data, the analysis team conducted an additional search of secondary data to confirm that all valid and reliable data concurred with the initial secondary data and to examine whether indicators within the health need disproportionately impact specific geographic, age, or racial/ethnic subpopulations. In the few cases where a potential health need demonstrated strong evidence of being an issue in Sonoma County in either qualitative or quantitative data, but not both, the SC CHNA Collaborative discussed and came to consensus about whether or not to include the health need.

Harder+Company summarized the results of this analysis in a matrix, which was then reviewed and discussed by the SC CHNA Collaborative.

Twelve health needs were identified that met the first criteria of having at least two distinct indicators that performed >1% worse than benchmark estimates. Only nine of these health needs met the additional criteria of being identified as a theme in key leader interviews and focus groups. One additional health need, Access to Housing, did not have a high secondary data score but was a significant theme in the majority of interviews and focus groups. Therefore, the SC CHNA Collaborative decided to include data about Access to Housing with Economic Insecurity, as access to safe and affordable housing and economic security are very closely linked. Access to Care did not meet the secondary data criteria, but was a strong theme in primary data. Because of a national focus on increasing access to primary care and the importance of this issue to residents and stakeholders in Sonoma County specifically, the SC CHNA Collaborative decided to include this health need.

B. Process and Criteria Used for Prioritization of the Health Needs

The Criteria Weighting Method, a mathematical process whereby participants establish a relevant set of criteria and assign a priority ranking to issues based on how they measure against the criteria, was used to prioritize the nine health needs. This method was selected as it enabled consideration of each health need from different facets, and allowed the Collaborative to weight certain criteria to use a multiplier effect in the final score.

To determine the scoring criteria, SC CHNA Collaborative members reviewed a list of potential criteria and selected a total of four criteria:

Criteria	Definition
Severity	The health need has serious consequences (morbidity, mortality, and/or economic burden) for those affected.
Disparities	The health need disproportionately impacts specific geographic, age, or racial/ethnic subpopulations.
Prevention	Effective and feasible prevention is possible. There is an opportunity to intervene at the prevention level and impact overall health

	outcomes. Prevention efforts include those that target individuals, communities, and policy efforts.
Leverage	Solution could impact multiple problems. Addressing this issue would impact multiple health issues.

In order to develop a weighted formula to use in prioritization, each member of the SC CHNA Collaborative assigned a weight to each criterion between 1 and 5. A weight of 1 indicated the criterion is not very important in prioritizing health issues whereas a weight of 5 indicated the criterion is extremely important in prioritizing health issues. The average of weights assigned by members of the SC CHNA Collaborative for each criterion were used to develop the formula below to provide a final formula to use in scoring health needs for prioritization.

Overall Score= (1*Severity) + (1.5*Disparities) + (1.5*Prevention) + (1*Leverage)

In order to review and prioritize identified health needs, a half-day prioritization session was held on November 20, 2015, at the First Presbyterian Church of Santa Rosa. A total of 45 stakeholders representing a breadth of sectors such as health, local government, education, early childhood, public safety, faith-based, and nonprofit leaders attended. The goals of the meeting were to: review health needs identified in Sonoma County; discuss key findings from the CHNA; and prioritize health needs in Sonoma County.

After each health need was reviewed and discussed, participants voted on each health need using the four criteria discussed above. The table below outlines the average score of the voting on each health need.

Health Needs in Priority Order					
Final Results		Unweighted Scores by Criteria			
Health Need	Weighted Score	Severity	Disparities	Prevention	Leverage
1. Early Childhood Development	31.67	6.21	6.41	6.28	6.43
2. Access to Education	30.21	5.74	6.10	6.10	6.20
3. Economic and Housing Insecurity	30.03	6.21	6.55	5.26	6.12
4. Oral Health	29.19	5.41	6.23	6.19	5.16
5. Access to Health Care	29.13	5.76	6.05	5.69	5.76
6. Mental Health	29.09	6.29	5.46	5.66	6.14
7. Obesity and Diabetes	28.44	5.81	5.57	5.82	5.55
8. Substance Use	26.38	5.73	4.61	5.41	5.63
9. Violence and Unintentional Injury	25.29	5.07	4.98	5.23	4.91

C. Prioritized Description of the Community Health Needs Identified Through the CHNA

In descending priority order, established per the vote at the end of the four-hour community convening, the following health needs were identified in Sonoma County; additional information about each health need can be found in Appendix A.

- 1. Early Childhood Development:** Child development includes the rapid emotional, social, and mental growth that occurs during gestation and early years of life. Adversities experienced in early life threaten appropriate development, and may include exposure to poverty; abuse or violence in the home; limited access to appropriate learning materials and a safe, responsive environment in which to learn; or parental stress due to depression or inadequate social support.⁵⁴

Exposure to early adversity is pervasive in Sonoma County. Among adults in Sonoma and Napa County (combined for stability), 22.0% report having experienced four or more unique early childhood experiences (ACEs) before age 18 which may including childhood abuse (emotional, physical, and sexual), neglect (emotional and physical), witnessing domestic violence, parental marital discord, and living with substance abusing, mentally ill, or criminal household members.⁵⁵ Key themes among residents and stakeholders included the high cost of living and high cost of child care in Sonoma County, as well as the importance of quality early education and home stability on development among young children.

- 2. Access to Education:** Educational attainment is strongly correlated to health: people with low levels of education are prone to experience poor health outcomes and stress, whereas people with more education are likely to live longer, practice healthy behaviors, experience better health outcomes, and raise healthier children.

In Sonoma County, Kindergarten readiness is used as an early metric to consider disparities in early learning. Third grade reading level is another predictor of later school success; in Sonoma County 43.0% of third grade children are scoring at or above the “Proficient” level on English Language Arts California Standards Test.⁵⁶ Although only 13.0% of county residents age 25+ have less than a high school diploma, extreme racial disparities exist. Among residents identifying as

⁵⁴ Jack P. Shonkoff and Deborah A. Phillips, eds., “From Neurons to Neighborhoods: The Science of Early Childhood Development,” National Research Council and Institute of Medicine, Committee on Integrating the Science of Early Childhood Development, National Academy Press, 2000.

⁵⁵ A Hidden Crisis: Findings on Adverse Childhood Experiences in California, Center for Youth Wellness, 2008-13.

⁵⁶ California Department of Education, Standardized Testing and Reporting (STAR) Results, 2013.

American Indian/Alaska Native, African American/Black, Hispanic/Latino, Native Hawaiian/Pacific Islander, and Some Other Race, a higher percentage of individuals have less than a high school diploma compared to the total population and compared to White residents.⁵⁷ English Language Learners are also a population of particular high concern with respect to educational attainment. Only 39.0% of tenth grade English Language Learners passed the California High School Exit Exam in English Language Arts, compared to 86.0% of all tenth grade students in Sonoma County.⁵⁸ Only 55.0% of English Language Learners passed in Mathematics, compared to 87.0% of all Sonoma County tenth graders.⁵⁹ For all students in the county, stakeholders identified the need to increase investment in early childhood education as a pathway to reducing educational disparities and increasing overall academic success.

3. **Economic and Housing Insecurity:** Economic resources such as jobs paying a livable wage, stable and affordable housing, as well as access to healthy food, medical care, and safe environments can impact access to opportunities to be healthy.

The high cost of living in Sonoma exacerbates issues related to economic security and stable housing. Among renters, 52.4% spend 30% or more of household income on rent.⁶⁰ A lack of affordable housing and a dearth of jobs paying a living wage were identified as key challenges to achieving economic and housing security in the county.

4. **Oral Health:** Tooth and gum disease can lead to multiple health problems such as oral and facial pain, problems with the heart and other major organs, as well as digestion problems.

In Sonoma County, oral health is in part affected by lack of access to dental insurance coverage or inadequate utilization of dental care. Among adults, 38.9% do not have dental insurance coverage and may find it difficult to afford dental care.⁶¹ Among adults 65 years and older, 51.8% do not have dental insurance coverage.⁶² Among adults, 9.2% have poor dental health.⁶³ In 2014, 51% of kindergarteners and 3rd graders had tooth decay.⁶⁴ Residents and stakeholders highlighted the lack of dental care providers who accept Denti-Cal, as well as the lack of early prevention of oral health problems, in part due to limited access to affordable preventative care.

5. **Access to Health Care:** Ability to utilize and pay for comprehensive, affordable, quality physical and mental health care is essential in order to maximize the prevention, early intervention, and treatment of health conditions.

With the implementation of the Affordable Care Act (ACA), many adults in Sonoma County are able to obtain insurance coverage and access regular healthcare. However, disparities persist. Specifically, lower income residents have difficulty accessing care, as many remain uninsured due to high premium costs and those with public insurance face barriers to finding providers who accept MediCal. Foreign-born residents who are not U.S. citizens also face stark barriers in obtaining insurance coverage and accessing care. While only 10.0% of Sonoma County residents are uninsured, 18.7% of residents earning below 138% of the Federal Poverty Level and 34.2% of foreign-born residents who are not U.S. citizens do not have insurance coverage.⁶⁵ Among those who do have insurance coverage, primary data identified other barriers to accessing care including

⁵⁷ US Census Bureau, American Community Survey, 2009-13.

⁵⁸ California Department of Education, 2013-14.

⁵⁹ California Department of Education, 2013-14.

⁶⁰ US Census Bureau, American Community Survey, 2014.

⁶¹ Sonoma County Local Health Department File, California Health Interview Survey, 2013-14.

⁶² Ibid.

⁶³ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES, 2006-10.

⁶⁴ Sonoma County Smile Survey, 2014.

⁶⁵ US Census Bureau, American Community Survey, 2014.

that there are not enough primary healthcare providers in Sonoma County to meet the high demand. Others noted difficulties in navigating the care delivery system in an efficient way.

- 6. Mental Health:** Mental health includes emotional, behavioral, and social well-being. Poor mental health, including the presence of chronic toxic stress or psychological conditions such as anxiety, depression or Post-Traumatic Stress Disorder, has profound consequences on health behavior choices and physical health.

Mental health was raised as a high concern for all residents, especially youth and residents experiencing homelessness. Most notably, Sonoma residents have a high risk of suicide. 12.3 per 100,000 county residents die by committing suicide, compared to 9.8 per 100,000 residents on average in California.⁶⁶ Depression is also a concern, as 31.3% of youth⁶⁷ and 14.1% of Medicare beneficiaries⁶⁸ are depressed. Residents and stakeholders noted challenges in obtaining mental health care, including that preventative mental health care and screening is limited and that stigma may prevent individuals from seeking professional treatment.

- 7. Obesity and Diabetes:** Weight that is higher than what is considered a healthy weight for a given height is described as overweight or obese.⁶⁹ Overweight and obesity are strongly related to stroke, heart disease, some cancers, and Type 2 diabetes.

In Sonoma County, an estimated 25.4% of adults are obese,⁷⁰ and 37.9% are overweight.⁷¹ Among youth, 17.5% are obese and 20.0% are overweight.⁷² Busy lifestyles and the high cost of living compete with purchasing and cooking healthy food. Lack of physical activity was also noted as a driver of obesity and diabetes, in part due to a lack of affordable exercise options.

- 8. Substance Use:** Use or abuse of tobacco, alcohol, prescription drugs, and illegal drugs, can have profound health consequences, including increased risk of liver disease, cancer, and death from overdose.⁷³

In Sonoma County, substance abuse was identified as a concern, particularly with respect to alcohol consumption. Among adults, 21.3% of residents report heavy alcohol consumption.⁷⁴ Youth were noted as a high risk population, and data indicates that in the prior 30 days 13.8% of 11th grade students reported using cigarettes, and 28.0% reported using marijuana.⁷⁵ Additionally, 24.4% of 11th grade students reported ever having driven after drinking.⁷⁶

- 9. Violence and Unintentional Injury:** Violence and injury is a broad topic that covers many issues including motor vehicle accidents, drowning, overdose, and assault or abuse, among others.

In Sonoma County, the data show that the core issues within this health need are related to domestic violence and violent crime. Among adults, 17.1% self-report having experienced sexual or physical violence by an intimate partner during adulthood.⁷⁷ The county also has high rates of

⁶⁶ University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, Death Public Use Data, 2010-12.

⁶⁷ California Healthy Kids Survey, 2011-13.

⁶⁸ Centers for Medicare and Medicaid Services, 2012.

⁶⁹ <http://www.cdc.gov/obesity/adult/defining.html>

⁷⁰ California Health Interview Survey, 2014.

⁷¹ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES, 2011-12.

⁷² California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-14.

⁷³ <http://www.cdc.gov/drugoverdose/epidemic/index.html>; <http://www.cdc.gov/alcohol/fact-sheets/womens-health.htm>; <http://www.cdc.gov/alcohol/fact-sheets/mens-health.htm>

⁷⁴ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse, 2006-12.

⁷⁵ California Healthy Kids Survey, 2011-13.

⁷⁶ California Healthy Kids Survey, 2011-13. Survey asks question about "respondent or a friend."

⁷⁷ California Health Interview Survey, 2009.

reported violent crime, including 28.4 incidents of rape per 100,000 population, compared to 21.0 per 100,000 residents on average in California, and 285.7 incidents of assault per 100,000 population, compared to 249.4 per 100,000 in California overall.⁷⁸

Consideration of the nine health needs that emerged as top concerns in Sonoma County highlights the significance of social determinants of health in building a healthier and stronger community. Access to resources including a secure and stable environment for early development, quality education, safe and affordable housing, and economic stability rose to the top of the prioritized list. These results align closely with county priorities and previous findings from the 2013 CHNA process and the *Portrait of Sonoma County*. In its entirety, this list of health needs supports the work of Health Action to foster collaboration and action, including key hospital partners, to identify cross-cutting strategies that address multiple health needs.

In addition to the supporting data presented for each identified health need, several cross-cutting themes emerged in primary data that speak to a broader consideration of community structure and cohesion. In working towards equal opportunities for people to lead safe, active, and healthy lifestyles, Sonoma residents and key stakeholders cited challenges in fostering a sense of community within neighborhoods and across the county. Poor transportation and isolation contribute to this problem, in particular in the lack of connection between Santa Rosa and less centrally-located areas of the county. In specific areas of the county, notably Russian River, residents cited garbage and blight as characteristics of their community that impede strong community vibrancy. Challenges were also identified in cultural integration across the county. In particular, residents noted that there is a strong Latino community in Sonoma County, yet it exists in social isolation from other cultures. Some interviewees and focus group participants felt that the community as a whole has not succeeded in integrating different cultures in part because of segregation in schools.

D. Community Resources Potentially Available to Respond to the Identified Health Needs

Sonoma County has a rich network of community-based organizations, government departments and agencies, hospital and clinic partners, and other community members and organizations engaged in addressing many of the health needs identified by this assessment. Examples of community resources available to respond to each community identified health need, as identified in qualitative data, are indicated in each health need profile in Appendix A. For a more comprehensive list of community assets and resources, please call 2-1-1 OR 707-565-2108, or reference <http://211sonoma.org/>.

Health Action plans to use the results of this CHNA to develop key strategies to address multiple health needs. These efforts will include a breadth of stakeholders and partners, as well as strategies intended to inform program implementation, policy development, community engagement efforts, and investment decisions. In this way, the resources that are available to respond to the identified health needs will work in collaboration to address cross-cutting drivers of multiple needs simultaneously.

VIII. 2013-2016 IMPLEMENTATION STRATEGY EVALUATION OF IMPACT- SEE ATTACHMENT

⁷⁸ Federal Bureau of Investigation, FBI Uniform Crime Reports. Additional analysis by the National Archive of Criminal Justice Data. Accessed via the Inter-university Consortium for Political and Social Research, 2010-12.

IX. APPENDICES

- A. Health Need Profiles**
- B. Secondary Data, Sources, and Dates**
- C. Community Input Tracking Form**
- D. Primary Data Collection Protocols**
- E. Prioritization Scoring Matrix**
- F. Sutter Santa Rosa Regional Hospital- Evaluation of 2013-2016 community benefit**

Healthy Eating and Physical Fitness

Name of Program, Initiative or Activity **Fighting Food Insecurity**

Description A survey of the residents' patients at the Community Health Center partner revealed that more than 60% of their patients experience regular food insecurity and often need to make unhealthy food choices based on affordability, or don't eat at all. We have entered into a partnership with the Redwood Empire Food Bank to be a food drop-off location once a week. Each Monday, patients of the Vista Clinic are invited to come and pick up one box of healthy, fresh food for their families. Patients are also educated about other food programs and food stamp exchanges at Farmers Markets.

Anticipated Impact and Plan to Evaluate We anticipate that when patients learn about the food resources available to them, they will report less food insecurity and will be able to focus on making healthy food choices.

2015 Impact Each week, 120 families receive anywhere from 2000-4000lbs of healthy food.

Mechanism(s) Used to Measure Impact No tracking is done to evaluate impact on healthy eating behavior or choices beyond the impact of receiving 16-32lbs of healthy weekly.

Community Benefit Contribution/Expense This is a program led by the Santa Rosa Family Medicine Residency Program and does not incur any additional cost beyond what Sutter is already investing to run the residency (that contribution is listed in other activities of this report).

Program, Initiative, or Activity Refinement none

Name of Program, Initiative or Activity **Redwood Empire Food Bank**

Description The Redwood Empire Food Bank is the regional leader in hunger relief. Their mission is to respond to immediate needs of people seeking help through the provision of healthy food and nutrition education. We pursue long-term solutions to food insecurity through public policy and the development of partnerships with civic, faith-based, corporate and government organizations and, most importantly, individuals in our community. Each month, the Food Bank feeds more than 82,000 hungry

people in Sonoma, Lake and Mendocino counties. Sutter Medical Center provides annual financial donations to support this mission.

Anticipated Impact and Plan to Evaluate

Each year, the Redwood Empire Food Bank operates three strategic hunger initiatives – Every Child, Every Day, Senior Security, and Neighborhood Hunger Network. The success of each initiative is measured based on process and/or outcome measures identified each year. Having access to healthy food is one of Health Action's primary goals and our progress is measured against the Healthy People 2020 benchmarks.

2015 Impact

- **Every Child Every Day** served approximately 36,000 children and their families through 6 different grocery programs (4 million pounds of food) and 3 meal programs (468,204 meals served).
 - **Senior Security** served 16,000 seniors through 3 programs distributing over 2,400,000 pounds of food.
 - **Neighborhood Hunger Network** provided 5.4 million pounds of food to 189 community organizations throughout Sonoma County to fuel their hunger-relief programs.
-

Mechanism(s) Used to Measure Impact

Sonoma County has developed the "Hunger Index" which measures the "missing meal gap" for our community's low-income. The gap is the difference between what people can provide for themselves along with assistance from local food programs and the USDA Food Plan's recommendations for the number of meals families need. Despite the economic recovery, the gap has increased 1% over last year to a 41% gap for our local families so there is much work to do.

Community Benefit Contribution/Expense

Sutter Health contributed \$6,000 to help fund these initiatives
Sutter Santa Rosa Regional Hospital contributed \$2,500.

Program, Initiative, or Activity Refinement

n/a

Access to Primary Care

Name of Program, Initiative or Activity

Family Medicine Residency Program

Description

Sutter Medical Center sponsors a three-year training program for medical school graduates desiring to be primary care doctors. The training is provided by Sutter physicians who are also adjunct professors with our partner, the UCSF Medical School. Residents are trained in the hospital and in the clinic setting by caring for patients under the clinical

supervision of faculty. Sutter has been sponsoring the program since 1996 but it has existed in our community for more than 40 years. Fueling the primary care pipeline in Sonoma County is vital to the health and well-being of our community. The cost of living is quite high and without this program, it would be very difficult to recruit family physicians.

Anticipated Impact and Plan to Evaluate

Each year, the program graduates 12 new family medicine physicians. In the wake of the Affordable Care Act, we project that about 14,000 people in Sonoma County who have been uninsured, will now have insurance and access to primary care. Sonoma County is fueling our pipeline of critically needed primary care doctors. Currently, more than 50% of Sonoma County's active family physicians are graduates of the program and about 75% of the doctors who staff the local Federally Qualified Health Centers are graduates. We do not have a valid way to measure the impact of this related to meeting the expected increased demand but we know that many of the doctors who train in Sonoma County stay here to live and work so we are "growing our own."

2015 Impact

The impact of the Santa Rosa Family Medicine program can be measured in many multi-factorial ways but in terms of increasing access to primary care in our community, the two biggest ways of measuring impact are in the numbers of patients seen by the residents (primarily low-income) and in the number of graduates who stay and practice in Sonoma County following graduation.

- 1) Numbers of 2015 graduates who are in practice in Sonoma County: 4/12
- 2) Number of 2015 graduates practicing locally who choose to work with low income populations exclusively at FQHCs: 5/12
- 3) Total number of 2013-2015 graduates who practice at FQHC's: 12/36

Mechanism(s) Used to Measure Impact

resident self-report

Community Benefit Contribution/Expense

\$11,064,661 (Cost to run the program less Medicare GME reimbursement)

Program, Initiative, or Activity Refinement

None planned.

Name of Program, Initiative or Activity

Partnership with Santa Rosa Community Health Centers ("free physicians")

Description	The Santa Rosa Family Medicine Residency program partners with Redwood Coalition for Health Care, to staff their Santa Rosa Community Health Center Vista Clinic with 36 family medicine residents, supervised by faculty physicians. This partnership essentially offers free physician staffing to a clinic that would otherwise have to hire staff physicians, providing a significantly increased capacity that the clinic would not be able to sustain on its own.
Anticipated Impact and Plan to Evaluate	The 36 residents provide approximately 25,000 patient visits each year to a population of people who are underserved and who without this clinic, would not have a reliable medical home. The quality of care is evaluated by preceptors and patients who complete patient satisfaction surveys.
2015 Impact	<ol style="list-style-type: none"> 1) 24,763 patient visits in 2014. 2) \$1.6 million approximate savings to Santa Rosa Community Health Center in physician salary
Mechanism(s) Used to Measure Impact	<ol style="list-style-type: none"> 1) Patient logs 2) Used average family medicine physician salary in Sonoma County plus 30% for benefits multiplied by the average number of patient visits per one full time physician (4,000) x 4.5 (\$200,000x 30%=\$260,000; 24,763/4,000=6.19)
Community Benefit Contribution/Expense	\$11,064,661 (Cost to run the program less Medicare GME reimbursement)
Program, Initiative, or Activity Refinement	None planned
Name of Program, Initiative or Activity	Social Advocates for Youth Mobile Health Van
Description	The Homeless Youth Mobile Van is a partnership between the Santa Rosa Family Medicine Residency, Santa Rosa Community Health Centers and Social Advocates for Youth (SAY). Once per month, two to three resident physicians, a volunteer community preceptor, a medical assistant and an HIV testing and outreach worker go to the shelter run by SAY in a van equipped with two treatment rooms and medical supplies. We offer basic urgent care services, such as treatment of skin infections and rashes, assessments of wounds and abrasions, general health screening, HIV testing, referrals for full STD testing, family planning services, testing and treatment of urinary tract infections, screening for diabetes, etc. When we cannot treat patients at the van we refer them to Brookwood Health Center for more comprehensive care. We also offer

initial mental health consultations and have even seen patients for prenatal and postpartum visits. In addition to these services, we spend time hanging out with the youth and working to build rapport and a longer partnership. In addition, our HIV outreach team offers rapid testing and our medical assistant enrolls patients in FPACT and provides information on Medi-Cal.

Anticipated Impact and Plan to Evaluate

Our primary goal is to create access to medical care at the van by developing relationships with homeless youth with the ultimate goal of helping them establish a medical home at Brookwood Health Center. In addition, we aim to teach residents about medical care in underserved and under-resourced settings, as well as specifics about teen and homeless health care.

We are collecting data on number of patients seen, complaints and services provided. We conduct annual needs assessments with the staff at Social Advocates for Youth and now at our new site Graton Day Laborer Center to examine together how we are meeting the health needs of these vulnerable populations in our community.

2015 Impact

- **148** visits in the mobile van since launching in August 2013.
- **54** individuals seen in the mobile van have followed up at one of our health centers.
- **73** individuals have received STI testing while being seen at our mobile van
- **27** individuals with mental health concerns have been connected with counseling, treatment, or referral.
- **54** individuals have received contraceptive-related care in our clinic including:
 - Depo-Provera
 - Condoms
 - Referral for clinic IUD placement

Mechanism(s) Used to Measure Impact

We continue to collect data on the number of patients seen at the mobile clinic, complaints, services provided, and follow-up.

Community Benefit Contribution/Expense

\$3,713 in grant funds from the American Academy of Family Medicine was used for supplies. The bulk of the contribution came from the resident's time, the value of which is included in an activity listed above (Family Medicine Residency Program)

Program, Initiative, or Activity Refinement

The Mobile Van is an exceptional way to connect with local groups from diverse backgrounds, offer medical care and create a relationship within our community. Our program creates access points for individuals and groups that live and work in our communities but have remained outside of medical care. In so doing, we aim to create community medicine that truly meets our community where they are.

This year Social Advocates for Youth has opened a new site, called the Dream Center. The Dream Center provides short & long-term housing for homeless youth and aged out foster care youth. Our goal is to add this site to our monthly rotation of clinic sites and meet these youth at their initial point of reintegration into care services. We will also continue to develop new sites to reach homeless teens and as well as other disenfranchised populations (day laborers, homeless adults)

Name of Program, Initiative or Activity	Home Visits- DISCONTINUED IN 2015
Description	The Family Medicine residents serve many medically fragile and poor seniors who cannot get into the clinic for appointments. In order to reduce access barriers and reduce unnecessary ED visits or hospitalizations, the residents make regular home visits to their homebound patients.
Anticipated Impact and Plan to Evaluate	Since the initiation of home visits, residents are noting that their elderly homebound patients, who were missing office visits, are now staying more compliant with medication and medical advice. It would be very difficult to measure the direct impact in terms of reduction of ED visits and hospitalizations as there are too many variables in this frail population. Instead, we will measure the number of home visits per doctor/per month.
2015 Impact	Residents logged 17 home visits total in 2014*
Mechanism(s) Used to Measure Impact	Resident logging of home visit hours
Community Benefit Contribution/Expense	The contribution came from the residents' time, the value of which is included in an activity listed above (Family Medicine Residency Program)
Program, Initiative, or Activity Refinement	*It was discovered that the residents are not consistently logging their home visits so the number reported above is considering lower than the actual number. Since there are too many variables impacting the integrity of this data and the ability to draw any conclusions between the activity and the impact, this activity will not be reported in future updates.

Access to Services for Behavioral Health Issues

Name of Program, Initiative or Activity	Drug Free Babies- DISCONTINUED SUPPORT IN 2015
Description	Pregnancy and childbirth are two critical windows in which women are most receptive to making positive changes around substance use. Drug-Free Babies (DFB) is our main referral source for connecting mothers/mothers-to-be with county substance recovery resources (residential and non-residential). Possible participants give consent for us to make a phone referral. We provide DFB with patient contact information and encourage DFB staff to meet with patients at the hospital to expedite entry to services. At the initial meeting, DFB staff conducts a full intake utilizing an industry standard comprehensive AOD intake tool. From there they consider client needs, possible funding stream and program openings. DFB is funded through a partnership with Sonoma County First Five Commission. The hospital's social work staff sits on a local advisory committee that helps to plan local interventions.
Anticipated Impact and Plan to Evaluate	Drug Free Babies tracks how many of the women we refer end up in services and the funding partner, Sonoma County First Five Commission, tracks outcomes.
2015 Impact	<p>Number of referrals: 41*</p> <p>Number of intakes: 23</p> <p>Number entering treatment: 16</p> <p>Number completing treatment: 9</p> <p>Number of client babies born with clean drug screen: 8**</p> <p><i>*does not include Q2 which was not reported</i></p> <p><i>**some clients still pregnant at the end of the reporting period</i></p>
Mechanism(s) Used to Measure Impact	Reports from program coordinator to primary funder, First Five
Community Benefit Contribution/Expense	Regrettably, Sutter is no longer actively participating in this program. Referrals are made when appropriate but staff is not participating in the steering group at this time.
Program, Initiative, or Activity Refinement	First Five is no longer funding this program in part due to the inconsistent and incomplete data collection. The county department of behavioral health will assume oversight and it is hoped that the data demonstrating impact will be tracked more consistently.

Name of Program, Initiative or Activity	Health Action															
Description	Health Action is a local collaborative of health and community leaders that are partnering to 'move the dial' on 10 local priorities designed to make Sonoma County the healthiest county in California by 2020. The chief executive at Sutter Medical Center sits on the steering committee and several clinical leaders serve on work groups targeting one or more of the 10 priorities. Mental Health is one of the 10 priorities.															
Anticipated Impact and Plan to Evaluate	<p>The overall goal is to meet all the statewide Healthy People 2020 benchmarks. The steering committee develops an action plan identifying short term objectives designed to move the county in that direction. The objectives for mental health are:</p> <p>1) Percent of adults who report needing help for mental/emotional problems who saw a mental health professional.</p> <p>2) Suicide deaths for Sonoma County youth ages 10 – 24.</p> <p>The objectives for substance use are:</p> <p>1) Percent of adolescents (12 – 17 years) not using alcohol or any illicit drug during the past 30 days.</p> <p>2) Percent of adults binge drinking alcoholic beverages during the past 30 days.</p> <p>3) Percent of adults smoking a cigarette in the past 30 days.</p>															
2015 impact	<p>Mental Health</p> <table><tr><td>1) 2008 Baseline- 50%;</td><td>2013-14*- 59%</td><td>2020 Target: 75%</td></tr><tr><td>2) 2008 Baseline- 11</td><td>2013* 4</td><td>2020 Target: 0</td></tr></table> <p>Substance Abuse</p> <table><tr><td>1) 2008 Baseline-53%</td><td>2013*- 72%</td><td>2020 Target-90%</td></tr><tr><td>2) 2008 Baseline-20%*</td><td>2014*- 32.6%</td><td>2020 Target-6%</td></tr><tr><td>3) 2008 Baseline-13%</td><td>2014*- 8.8%</td><td>2020 Target-10%</td></tr></table> <p>*most recent data available Worse than last reporting Better than last reporting Same as last reporting</p> <p>Also of note is that Sonoma County was ranked as the 6th Healthiest County in California by the Robert Wood Johnson Foundation in 2015.(up from #8 in 2014) .</p>	1) 2008 Baseline- 50%;	2013-14*- 59%	2020 Target: 75%	2) 2008 Baseline- 11	2013* 4	2020 Target: 0	1) 2008 Baseline-53%	2013*- 72%	2020 Target-90%	2) 2008 Baseline-20%*	2014*- 32.6%	2020 Target-6%	3) 2008 Baseline-13%	2014*- 8.8%	2020 Target-10%
1) 2008 Baseline- 50%;	2013-14*- 59%	2020 Target: 75%														
2) 2008 Baseline- 11	2013* 4	2020 Target: 0														
1) 2008 Baseline-53%	2013*- 72%	2020 Target-90%														
2) 2008 Baseline-20%*	2014*- 32.6%	2020 Target-6%														
3) 2008 Baseline-13%	2014*- 8.8%	2020 Target-10%														
Mechanism(s) Used to Measure Impact	Various sources of secondary data at the county and state level. Some metrics are not measured annually.															

Community Benefit Contribution/Expense

Three of our executives sit on workgroups for Health Action. Each group meets monthly for 1 hour and we value that at \$150/hr so the total quantifiable cost is \$3,600.

Program, Initiative, or Activity Refinement

A new action plan for these metrics is being developed this year.

Cardiovascular Disease

Name of Program, Initiative or Activity

Heart Works Cardiac Rehabilitation Program

Description

Heart Works is a Phase II and III cardiac rehabilitation program that helps patients recover from a major cardiac event and helps reduce the risk for another one. Northern California Center for Well-Being and the Northern California Medical Associates makes annual grants to assure the sustainability of this vital program.

Anticipated Impact and Plan to Evaluate

Heart Works measures the following outcomes three months into the program:

- 1) Aerobic capacity, flexibility and strength
 - 2) Body fat composition
 - 3) Participant satisfaction
 - 4) Individualized action plans
-

2015 Impact**Phase II Cardiac Rehabilitation:**

Phase II Cardiac Rehab is a monitored cardiac rehab program usually offered at 36 sessions.

Category	Result	Target
Participants	148 (Jan-Dec)	130
	Total encounters: 4,189	Total encounters 4,260

Knowledge: "Know when and why to call my doctor"	93% excellent or good 69% excellent 24% good 4% fair 4% no opinion	100% excellent or good
Behavior "I have gained confidence in my ability to exercise"	97% excellent or good (75% excellent) (22% good) (3% fair)	100% excellent or good
Behavior "Exercise has made every day activities easier"	92% excellent or good (67% excellent) (25% good) (7% fair) (1% poor)	100% excellent or good
Behavior "Mutually set goals are realistic and attainable"	98.5% excellent or good (82% excellent) (16.5% good) (1.5% poor)	100% excellent or good
Quality of Life "My current quality of life is..."	98.5% excellent or good (64.5% very good) (34% good) (1.5% good)	100% very good or good
Dartmouth Survey*	Target score: 21 or below Drop by 15%	Average starting score: 23 Average ending score: 18 Drop by 18.5%
Heart Disease Quality of Life Questionnaire**	90% or increase by 10%	Before program: 4.62 on average (76%) After program: 5.1 on average (87%) Increase by 11% on average
Clinical:		
Blood Pressure	100% less than	80.5%

	150/90	
Body Composition	Reduction of 3% or based on individual need.	Drop of 2.5% on average
MET Level***	MET Level: 5 or Patient (Pt) doubles starting MET level	Average Pre MET Level: 2.5 Average Post MET Level: 3.7.5 Patients at goal: 51% Pt exceeding MET Level 5: 11% Pt doubling MET Level: 40% Pt maintaining Met Level: 55%

*The Dartmouth COOP method consists of nine questions measuring nine domains of health status: physical fitness, feelings, daily activities, social activities, social support, quality of life, change in health status, current overall health perceptions and bodily pain. Each question has five response options. A lower number indicates improvement.

**The Heart Disease Quality of Life is a 25 question questionnaire that directly measures the impact of heart disease on patients, including their symptoms, quality of life, and ability to function physically and mentally. Patients score the questions from 1 (all of the time) to 6 (never).

***METs are a unit of energy expenditure that is based on oxygen consumption. MET means "metabolic equivalent of task", or is sometimes simply called "metabolic equivalent". One MET is the oxygen consumed by the individual at rest.

Phase III Cardiac Rehabilitation:

Patients have documented improvements in aerobic capacity; body composition; and endurance within 3 months adherence to program recommendations. HeartWorks has maintained consistent enrollment throughout the year. Seventeen (53) Of the 246 Phase III Patients were new during Jan-Nov 2014.

Category	Result	Target
Participants	165 (74%) 8117 encounters (101%)	15 participants per session at 12 sessions a week= 180 8,000 encounters
Clinical measure: Blood Pressure	Ongoing patients Systolic BP: 98% Diastolic BP: 98% New patients Systolic BP: 100%	Less than 150/90

Mechanism(s) Used to Measure Impact

Clinical measurements as indicated above

Community Benefit Contribution/Expense	\$152,609 in grants to fund these programs
Program, Initiative, or Activity Refinement	None planned
Name of Program, Initiative or Activity	Community Access to Automated External Defibrillators (AEDs)
Description	An AED is a portable electronic device that automatically diagnoses the potentially life threatening cardiac conditions and is able to treat them through defibrillation, the application of electric therapy which stops arrhythmia, allowing the heart to reestablish an effective rhythm. Uncorrected, these cardiac conditions rapidly lead to irreversible brain damage and death. Through a partnership with St. Jude, we are receiving five AED devices to deploy in high-risk, high impact locations throughout Sonoma County.
Anticipated Impact and Plan to Evaluate	Studies demonstrate that any location with 1000 adults over the age of 35 present per day during the normal business hours (7.5 hours/day, 5 days per week, 250 days per year) can expect one incident of sudden cardiac arrest every 5 years. For every minute that a cardiac arrest victim waits for emergency response, the survival rate decreases by 7% to 10%. Combined with CPR, the use of an AED may increase the likelihood of survival by 75% or more.
2015 Impact	In 2015, we deployed 6 AED's throughout Sonoma County. We have not received report of any of them being used.
Mechanism(s) Used to Measure Impact	n/a
Community Benefit Contribution/Expense	n/a
Program, Initiative, or Activity Refinement	None planned
Name of Program, Initiative or Activity	Provision of Life-Saving Medication to Rural Coastal Clinic

Description	The only FDA-approved treatment for ischemic strokes is tissue plasminogen activator (tPA). tPA is also used for acute heart attacks to open clogged arteries. This medication works by dissolving the clot and improving blood flow to the part of the brain/heart being deprived of blood flow. If administered within 3 hours (and up to 4.5 hours in certain eligible patients), tPA may improve the chances of recovering from a stroke or heart attack. Sutter Medical Center is the closest hospital (providing stroke and heart attack (STEMI) care) to a rural, coastal clinic in South Mendocino County, approximately 60 one-lane road miles away. The tPA medication is cost-prohibitive for the clinic which decreases chance of a significant recovery from an ischemic stroke or heart attack for patients in that area. Sutter Medical Center has agreed to ensure that the clinic has one dose of tPA at all times.
Anticipated Impact and Plan to Evaluate	With this medication available, this rural clinic will have life-saving medication "in the field" that would otherwise only be available in an emergency room. For this remote clinic, that could be the difference between life and death for a patient having a heart attack.
2015 Impact	One dose provided to the Gualala Clinic. It has not been used yet so we have no impact to report.
Mechanism(s) Used to Measure Impact	Once the medication is used, the clinic will request another does at which time we will request a report on the patient outcome.
Community Benefit Contribution/Expense	\$2,500. (cost of one does)
Program, Initiative, or Activity Refinement	n/a

Access to Health Care Coverage

Name of Program, Initiative or Activity	Eligibility Screening and Application Assistance
Description	Many patients come into the emergency department who are uninsured. The Affordable Care Act now requires all individuals to secure health insurance. Low-income people may be eligible for free public programs or subsidies to assist them in purchasing private health insurance. The emergency room is the "point of entry" for many into the health care system so offering assistance in determining eligibility for public

	<p>programs and completing applications is an important community benefit. Sutter Medical Center has on-staff financial counselors who spend a considerable amount of time doing eligibility screening. Additionally, the hospital pays for contractual services to provide onsite application assistance.</p>
Anticipated Impact and Plan to Evaluate	Having insurance is directly related to better health outcomes. We measure the number of patients screened and the number of patients who are assisted with applications.
2015 Impact	1) \$255,668 (value of 4080 staff hours and annual contract with county for onsite eligibility worker) 2) 2,662 uninsured people served
Mechanism(s) Used to Measure Impact	Department manager tracks # of people served and number of staff hours
Community Benefit Contribution/Expense	\$255,668 (see above)
Program, Initiative, or Activity Refinement	The department manager will participate in a county-wide collaborative to develop and implement strategies to help insure the remaining uninsured, particularly those impacted by SB 75.
Name of Program, Initiative or Activity	Covered Sonoma County
Description	A local program developing local partnerships and outreach strategies to educate and enroll uninsured and self-employed people about their options under the Affordable Care Act. The collaborative is working with local hospitals and health care providers, community-based organizations and other community groups to provide information and help people make the right choices for affordable health care. Senior staff from Sutter Medical Center serves on the steering committee.
Anticipated Impact and Plan to Evaluate	Each month, the steering committee is provided a report with updated enrollment and renewal statistics. The overall goal is for 100% coverage but there are intermediate goal initiatives such as the Schools 100% campaigns.
2015 Impact	# of new Medi-Cal applications: 5357 # of renewals: 1723

	Total applications: 17,213
Mechanism(s) Used to Measure Impact	Certified Application Assistants track all activity per enrollment site. In addition to enrolling previously uninsured people, there is a focus on renewing existing enrollees, particularly those on Medi-Cal for which there is a high rate of disenrollment due to lack of follow-through from members once they are initially enrolled.
Community Benefit Contribution/Expense	Sutter representative sits on steering committee and attends monthly meetings. Total quantifiable contribution: \$445
Program, Initiative, or Activity Refinement	With the passing of SB 75, the group's primary focus will be to insure the remaining uninsured, following the full implementation of the ACA

Coordination and Integration of Local Health Care System

Name of Program, Initiative or Activity	Health Care for the Homeless
Description	The Sonoma County Task Force on the Homeless convened a work group in 2010 for the coordination of health care services for homeless people in our community. All of the hospitals see a high percentage of homeless people in the ED and in the hospital bed. Providing good transitions of care for this population is very challenging. The group works to develop processes and "wrap around" services with the goal of reducing unsafe discharges from the hospital to the street, and to work collaboratively to coordinate medical, mental health, and substance use disorders services for homeless patients. Sutter Medical Center supports these efforts by committing professional staff time monthly to attend meetings and participate in planning programs and services. Additionally, Sutter provides significant financial support to operate the county's only medical respite shelter that provides a safe transition for homeless patients from hospital to community living that allows extended convalescence not typically allowed in traditional shelter settings.
Anticipated Impact and Plan to Evaluate	Quarterly, Sutter Medical Center is provided a statistical report that shows the number of referrals from all local hospitals to the shelter and services that were provided/referred to patients staying at the shelter. These are patients who might otherwise be readmitted to the hospital for failing to manage their health on the street.
2015 Impact	Total people served: 165

Appendix A

Sonoma County Community Health Needs Assessment Health Need Profiles

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Indicator Key

Throughout the health need profiles, California state average estimates are included where available for reference. Differences between Sonoma County and California state estimates are not necessarily statistically significant, and are color coded as follows:

Sonoma County performs \geq 5% (or units) better than California

Sonoma County performs within 5% (or units) better or worse than California, or no California are data available

Sonoma County performs \geq 5% (or units) worse than California



Early Child Development

Child development includes the rapid emotional, social, and mental growth that occurs during gestation and early years of life. Adversities experienced in early life threaten appropriate development, and may include exposure to poverty, abuse or violence in the home, or parental stress due to depression or inadequate social support.¹ Adverse Childhood Experiences (ACEs)[†] are linked to poor brain development, as well as many poor mental and physical health outcomes in adulthood, including increased risk for heart disease, depression, suicide attempts, and alcoholism, among others; these risks increase in correlation with the number of ACEs experienced during childhood.² This area was identified as a health need due to the high percent of adults that lack social support and that have experienced four or more ACEs before age 18 compared to state benchmarks, and because childhood trauma and adversity were key themes in qualitative data. Specifically, access to quality learning environments, access to care, the importance of promoting healthy parenting, and high prevalence of adversity at home were key themes in focus groups and interviews. Further data collection is needed to truly understand the impact of adversity among youth in Sonoma County, and in particular to explore geographic and other population-based disparities that exist within this critical health need.

Key Data

Indicators

Rate of Substantiated Claims of Child Maltreatment³ Per 1,000 Population; Age 0-17

HP 2020 Goal: ≤ 8.5



Percent of Adults That Have Experienced 4+ Adverse Childhood Experiences (ACEs) Before Age 18⁴



“These kids are all kids who come from significant experience of adversity, high levels of chronic and toxic stress. We believe and research suggests that that disrupts neurodevelopment. Many of our kids have trouble with attention, self-regulation, and management of emotion – secondary to their disruptive neurodevelopment.”
– Interviewee

Key Themes from Qualitative Data

Access to quality learning environments

- High cost of child care
- Need for quality child care: educational attainment as well as social and emotional development

Access to care

- Limited number of pediatricians

Promote healthy parenting

- Need for stability for foster youth
- Need support for new parents (home-visiting)
- Reduce child abuse

High prevalence of adversity at home

- Exposure to poverty/high cost of living

[†] The ACEs study considers ten specific adverse events: childhood abuse (emotional, physical, and sexual), neglect (emotional and physical), witnessing domestic violence, parental marital discord, and living with substance abusing, mentally ill, or criminal household members.² A broader range of adversities are correlated with poorer brain development and adverse health effects through other research.

Note: California state average estimates are included for reference. Differences between Sonoma County and California state estimates are not necessarily statistically significant.



Early Child Development

(continued)

Key Drivers

Driver: Exposure to Poverty

Exposure to Poverty, Youth

% of children living below 100% of Federal Poverty Line⁵

12.8 | **22.7**
Sonoma California

Exposure to Food Insecurity, Youth

% of children <18 living in households with limited or uncertain access to adequate food⁶

21.5 | **26.3**
Sonoma California

"I think a lot about the issue of toxic stress. I don't think abuse and neglect are only in poor communities, but other issues like overcrowding and food insecurity and housing troubles, having healthcare, navigating issues around immigration, speaking another language, all of those things create significant stress in a lot of kids and families. Kids who grow up in high stress environments, it impacts brain development."

– Interviewee

Driver: Early Learning Environment

Preschool Enrollment

% of children age 3-4 enrolled in Head Start, licensed child care, nurseries, Pre-K, registered child care, and other cares⁷

58.1 | **47.8**
Sonoma California

"For all families, the cost of early care and education is prohibitive. Parents know now that they should have high-quality preschool for their children before they enter Kindergarten so they're ready."

– Interviewee

Driver: Inadequate Social Support

Social Support, Adult

% adults without adequate social / emotional support (age-adjusted)^{8,†}

18.7 | **24.6**
Sonoma California

"You may be so stressed working so many jobs just to make ends meet that there isn't a community connection. Then you don't have that social support."

– Interviewee

Foster Placement Stability, Youth

% of children in foster care system for more than 8 days but less than 12 months with 2 or less placements^{9,††}

85.3 | **86.6**
Sonoma California

† Considered as a proxy for social support among parents; data for subpopulation of adults with young children not available.

†† Foster care placement stability is an important factor that may enable children to develop secure relationships with adults. It can also reduce potential stressors associated with multiple displacements. (Placement Stability in Child Welfare Services, U.C. Davis Center for Human Services, 2008).



Early Child Development

(continued)

Assets and Ideas

Examples of Existing Community Assets [†]

Health Action / First 5
Commission



Sonoma ACEs Connection



Maternal, Child, and
Adolescent Health Programs



Ideas from Focus Group and Interview Participants[†]

Increase support for parents and families

- Increase screening and support for perinatal mental health issues
- Increase funding for parent support programs
- Increase access to affordable child care, particularly for infants

Increase mental health services for young children and families

- Provide universal mental health screenings in schools
- Improve mental health services for foster care youth
- Increase access to family counseling

[†] Assets and recommendations excerpted from qualitative data and SC CHNA Collaborative. For a comprehensive list of county assets and resources, reference <http://211sonoma.org/>.

¹ Jack P. Shonkoff and Deborah A. Phillips, eds., "From Neurons to Neighborhoods: The Science of Early Childhood Development," National Research Council and Institute of Medicine, Committee on Integrating the Science of Early Childhood Development, National Academy Press, 2000.

² "Adverse Childhood Experiences: Major Findings," Centers for Disease Control and Prevention, accessed November 2015, <http://www.cdc.gov/violenceprevention/acestudy/findings.html>.

³ California Child Welfare Indicators Project, UC Berkeley Center for Social Services Research, 2014.

⁴ A Hidden Crisis: Findings on Adverse Childhood Experiences in California, Center for Youth Wellness, 2008-13.

⁵ US Census Bureau, American Community Survey, 2014.

⁶ Feeding America, Map the Meal Gap, 2012. Accessed via kidsdata.org, November 2014.

⁷ US Census Bureau, American Community Survey, 2014.

⁸ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse, 2006-12.

⁹ California Child Welfare Indicators Project, UC Berkeley Center for Social Services Research, 2013-14.

Access to Education



Educational attainment is linked to health: people with low levels of education are prone to experience poor health outcomes and stress, whereas people with more education are likely to live longer, practice healthy behaviors, experience better health outcomes, and raise healthier children.¹ Access to Education/Knowledge is a fundamental area of focus in the Portrait of Sonoma County 2014 report which found that variation in educational outcomes by census tract in Sonoma County is significant and meaningful.² This area was identified as a health need because indicators measuring third grade reading proficiency, the percent of graduating students meeting UC or CSU course requirements, and the suspension rate scored worse than state benchmarks, and because lack of access to quality early childhood education and insufficient school funding were key themes in focus groups and interviews. While key education outcomes, such as high school graduation rate, are higher for Sonoma County than the rest of California, evidence of extreme racial/ethnic disparities call attention to this need as a high concern in the county.

Key Data

Indicators

Percent of Graduating Students Meeting UC or CSU Course Requirements (a-g requirements)³



Percent of Third Grade Children in Public Schools Scoring at or Above the "Proficient" Level on English Language Arts California Standards Test⁴



Percent of Students Graduating from High School within Four Years⁵



"The lack of educational access at the **0-5 age is critical and a priority** in our community. The return on investment at that point is so high that being sure that every young person has access to some kind of education at that point is really critical."
– Interviewee

"We know **the higher education someone has, the better their health outcomes**. Educating families, educating parents – helping parents to complete their own high school education, will vastly increase the overall health status of everyone in Sonoma County."
– Interviewee

Key Themes from Qualitative Data

Lack of access to early childhood education

- Need for quality childcare and universal preschool
- Importance of early investment

Lack of services/resources in schools

- Lack of enrichment / extra-curricular activities
- Limited resources for physical education
- Funding cuts

Note: California state average estimates are included for reference. Differences between Sonoma County and California state estimates are not necessarily statistically significant.

Access to Education (continued)



Supporting Data

Early Childhood Education

Kindergarten Readiness
% children ready for kindergarten⁶

36.0
Sonoma

Preschool Enrollment
% of children age 3-4 enrolled in Head Start, licensed child care, nurseries, Pre-K, registered child care, and other cares⁷

58.1 | 47.8
Sonoma | California

"Investment in early care and education, including Nurse Family Partnership, where we are giving support early in life to those with the greatest need, those who have the potential to begin that cycle of unhealthy life – I think that's the greatest systems change we could make that would have the greatest impact long-term. Supporting our youngest kids to be prepared by 5 years old to **enter kindergarten strong and healthy and supported**. It's a long-term investment but I think it's our greatest opportunity."

– Interviewee

English Language Learners

English Language Performance (Grade 10)
% of all students versus English language learners (grade 10) who passed the California High School Exit Exam in English Language Arts⁸

86.0 | 39.0 | 38.0
Sonoma: All | Sonoma: ELL | California: ELL

Math Performance (Grade 10)
% of all students versus English language learners (grade 10) who passed the California High School Exit Exam in Math⁹

87.0 | 55.0 | 54.0
Sonoma: All | Sonoma: ELL | California: ELL

Retention/Discipline

Expulsion
Rate of expulsion per 100 enrolled K-12 public school students¹⁰

0.04 | 0.05
Sonoma | California

Suspension
Rate of suspension per 100 enrolled K-12 public school students¹¹

4.41 | 4.04
Sonoma | California

Educational Attainment

Less than High School Education
% of population age 25+ with no high school diploma¹²

13.3 | 18.8
Sonoma | California

Post-Secondary Education
% of population age 25+ with Associates Degree or higher¹³

41.5 | 38.8
Sonoma | California

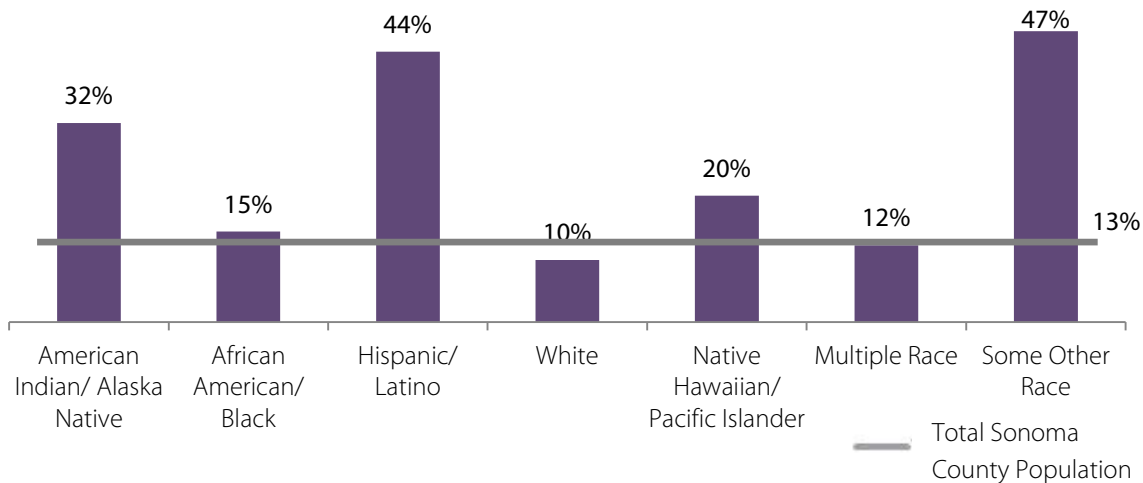
Access to Education (continued)



Populations Disproportionately Affected

Populations at Greatest Risk

Percent of Sonoma County Population (Age 25+) with No High School Diploma by Race/Ethnicity¹⁴



Public schools were reported to be under-resourced, and thus limited in their ability to improve teaching models and enhance student and family engagement. These disparities may increase racial/ethnic disparities in educational attainment, as interviewees noted that White students were more likely to attend private school than students of other backgrounds. Some interviewees supported models that moved away from standardized testing and structured curricula.

“Education is tied often to poverty and race. If you can pay for better schools or live in a school district that is better funded, your kid gets a better education and will have better prospects and better health. All of that is part of the story.”
– Interviewee

The **Latino community** is disproportionately impacted by this issue, as demonstrated in the graph above. Qualitative data themes highlight language barriers and low educational attainment among parents as challenges that may limit parents’ ability to support their children with school assignments at home.

Sonoma County Community Health Needs Assessment

Access to Education (continued)

Assets and Ideas

Examples of Existing Community Assets[†]

Cradle to Career Sonoma County



School Districts



Colleges/Universities



Ideas from Focus Group and Interview Participants[†]

Increase resources and collaboration within schools

- Increase financial resources for schools
- Increase involvement of K-12 system in early childhood education

Improve Integration of schools and health

- Consider schools as an integral part of public health and community services
- Incorporate health and wellness education into school setting
- Use schools as a means for community outreach and dialogue about health needs and issues

Address education inequality & health disparities

- Focus on early education investments for children 0-5 years
- Foster greater family & parent engagement in the schools
- Increase support to recruit and retain highest quality educators
- Increase access to English classes

[†] Assets and recommendations excerpted from qualitative data and SC CHNA Collaborative. For a comprehensive list of county assets and resources, reference <http://211sonoma.org/>.

¹ “Exploring the Social Determinants of Health: Education and Health,” Robert Wood Johnson Foundation, Accessed October 19, 2015, http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2011/rwjf70447.

² “A Portrait of Sonoma County; Sonoma County Human Development Report,” Measure of America, 2014.

³ California Department of Education, 2013-14.

⁴ California Department of Education, Standardized Testing and Reporting (STAR) Results, 2013.

⁵ California Dept. of Education, California Longitudinal Pupil Achievement Data System (CALPADS), May 2015. Accessed via kidsdata.org.

⁶ Road to the Early Achievement and Development of Youth, Ready to Learn: Findings from the Kindergarten Student Entrance Profile: Sonoma County, 2015-16.

⁷ US Census Bureau, American Community Survey, 2014.

⁸ California Department of Education, 2013-14.

⁹ Ibid.

¹⁰ California Department of Education, 2013.

¹¹ Ibid.

¹² US Census Bureau, American Community Survey, 2010-14.

¹³ Ibid.

¹⁴ US Census Bureau, American Community Survey, 2009-13.



Economic & Housing Insecurity

Economic security is very strongly linked to health; having limited economic resources can impact access to opportunities to be healthy, including access to healthy food, medical care, and safe environments.¹ In addition to good paying jobs, access to stable, affordable housing is also an essential foundation for good health. Substandard housing and homelessness tends to exacerbate other physical and mental health issues. High cost of living contributes to both economic and housing issues. This area was identified as a health need because lack of affordable housing and employment opportunities were key themes in focus groups and interviews. Secondary data about housing is limited. In Sonoma County, while many economic indicators such as but qualitative data indicates that while unemployment and housing costs are better in Sonoma County than statewide, the cost of living is higher in the county than other parts of the state. Additionally, poverty rates for older adults are higher than California as a whole. Youth, older adults, and the Latino community were identified by key informants as populations with particularly high risk.

Key Data

Indicators

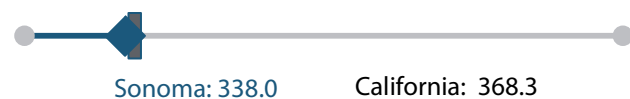
Percent of Renters Spending 30% or More of Household Income on Rent²



Percent of Population Living 200% Below Federal Poverty Level³



HUD-Assisted Units (per 10,000 housing units)^{4,†}



Total HUD-Assisted Units in Sonoma County: 6481 units⁵

"We live in a community that's very expensive, and there are **not enough jobs with a living wage**. The equation doesn't add up to your basic needs to live; without enough income your **housing situation** will be a challenge. There's a lack of affordable housing in the first place."

– Interviewee

"Issues like overcrowding and food insecurity and housing troubles, having healthcare, navigating issues around immigration, speaking another language, all of those things create **significant stress** in a lot of kids and families."

– Interviewee

Key Themes from Qualitative Data

Lack of affordable housing

- Drastic increase in cost of housing in recent years
- Increase in homelessness
- Overcrowded housing

Employment opportunities

- Caregivers, teachers, nonprofit workers unable to afford living in Sonoma
- Lack of transportation options
- Lack of jobs that pay living wages

† Reports counts of all housing units receiving assistance through the US Department of Housing and Urban Development (HUD). Assistance programs include Section 8 housing choice vouchers, Section 8 Moderate Rehabilitation and New Construction, public housing projects, and other multifamily assistance projects. Units receiving Low Income Housing Tax Credit assistance are excluded from this summary.

Note: California state average estimates are included for reference. Differences between Sonoma County and California state estimates are not necessarily statistically significant.



Economic & Housing Insecurity(continued)

Supporting Data and Key Drivers

Supporting Data: Housing Quality

Vacant Housing Units

% of housing units that are vacant^{6,†}

9.2 | 8.5
Sonoma | California

Overcrowded Rental Environments

% of renter occupied households with more than 1 person per room⁷

9.3 | 13.2
Sonoma | California

"The unemployment rate has dropped significantly since 2013, but... the salary and cost of living has not kept up with housing. As an employer, it's more and more difficult to find teachers who can live here... the same thing for nurses, fireman, and policemen."

– Interviewee

Supporting Data: Poverty and Unemployment

Children in Poverty

% of children (age < 18) living below 100% of Federal Poverty Level^{8,††}

12.8 | 22.7
Sonoma | California

Older Adults in Poverty

% of adults (age 65+) living below 100% of Federal Poverty Level^{9,††}

7.9 | 10.6
Sonoma | California

Unemployment Rate

% of civilian non-institutionalized population age 16 and older that is unemployed¹⁰

5.0 | 6.8
Sonoma | California

Driver: Education

Percent Population Age 25+ with No High School Diploma¹¹

13.2 | 18.5
Sonoma | California

3rd Grade Reading Proficiency

% of all public school students tested in 3rd grade who scored proficient or advanced on the English Language Arts California Standards Test¹²

43.0 | 45.0
Sonoma | California

Driver: Cost of Living

Median Household Income

Income in past 12 months in 2014 inflation-adjusted dollars¹³

\$68k | \$62K
Sonoma | California

Living Wage

Annual income required to support one adult and one child¹⁴

\$52k | \$47k
Sonoma | California

"We don't have a living wage ordinance in Sonoma county, and I'm not sure even a living wage would allow young people to live comfortably per se, but definitely increase housing and things like that. They're not even making enough to live here. Affordability is a huge factor."

– Interviewee

† Vacant housing reported as an indicator of blight across the city. Research demonstrates links between foreclosed, vacant, and abandoned properties with reduced property values, increased crime, increased risk to public health and welfare, and increased costs for municipal governments. (U.S. Department of Housing and Urban Development, Evidence Matters, Winter 2014).

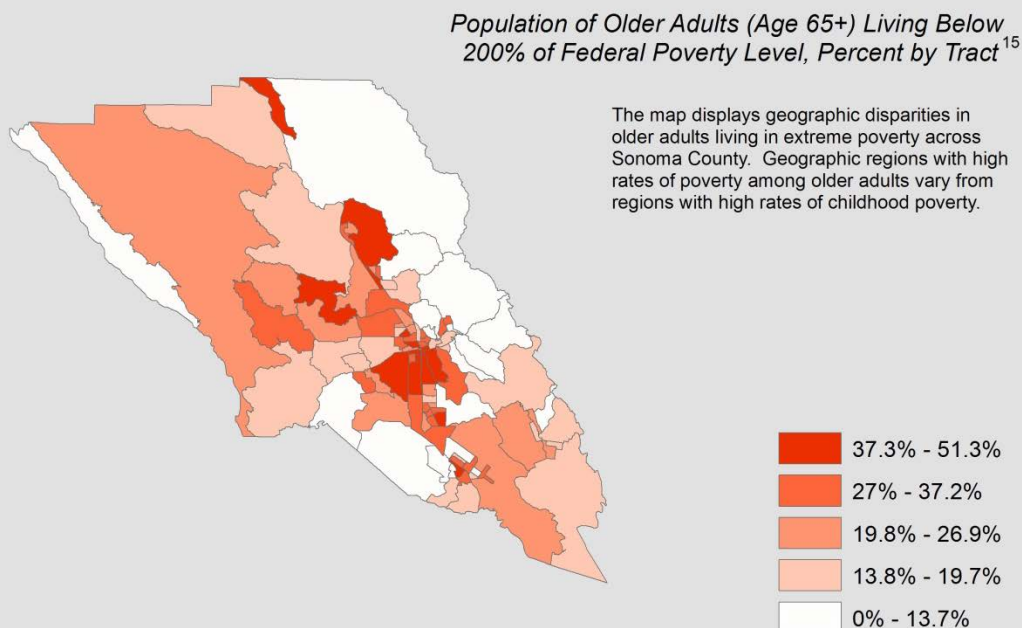
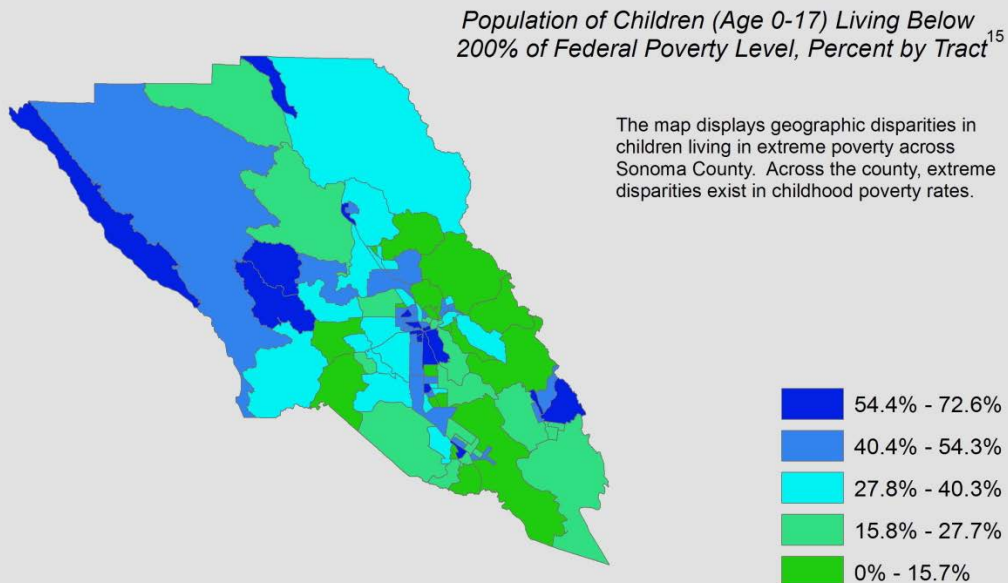
†† Due to high cost of living, income <100% of FPL indicates severe poverty in Sonoma County.



Economic & Housing Insecurity(continued)

Populations Disproportionately Affected

Geographic Areas with Greatest Risk



Populations with Greatest Risk

Racial/Ethnic disparities

Interviewees and focus group participants emphasized the disproportionate impact of poverty and the ability to afford quality housing on the Latino population in Sonoma County.



Economic & Housing Insecurity(continued)

Assets and Ideas

Examples of Existing Community Assets[†]

Businesses and Nonprofits supporting workforce development for marginalized youth



Mobile Clinics / Emergency Family Shelters



Transitional housing programs / Senior housing



Ideas from Focus Group and Interview Participants[†]

Workforce development

- Increase support for employers to support hiring marginalized youth
- Enforce living wage
- Increase workforce development
- Improve accessibility of public transportation
- Increase employment resources specifically for women in Cloverdale
- Develop programs that work to employ adults and youth with criminal records

Address rising cost of living

- Implement policy changes that address affordable housing
- Increase access to affordable child care

Reduce impacts on health

- Increase trauma-informed care and care that addresses the impact of toxic stress

[†] Assets and recommendations excerpted from qualitative data and SC CHNA Collaborative. For a comprehensive list of county assets and resources, reference <http://211sonoma.org/>.

¹ "Health & Poverty," Institute for Research on Poverty, Accessed October 19, 2015, <http://www.irp.wisc.edu/research/health.htm>.

² US Census Bureau, American Community Survey, 2014.

³ US Census Bureau, American Community Survey, 2010-14.

⁴ US Department of Housing and Urban Development, 2014.

⁵ Ibid.

⁶ US Census Bureau, American Community Survey, 2010-14.

⁷ US Census Bureau, American Community Survey, 2014.

⁸ Ibid.

⁹ Ibid.

¹⁰ US Department of Labor, Bureau of Labor Statistics, 2015.

¹¹ US Census Bureau, American Community Survey, 2010-14.

¹² California Department of Education, Standardized Testing and Reporting (STAR) Results, 2013.

¹³ US Census Bureau, American Community Survey, 2014.

¹⁴ Calculated from livingwage.mit.edu; 2015.

¹⁵ US Census Bureau, American Community Survey, 2009-13.



Oral Health

Tooth and gum disease can lead to multiple health problems such as oral and facial pain, problems with the heart and other major organs, as well as digestion problems.¹ Oral health was identified as a health need because secondary data indicate that while there are dentists throughout the county, insurance coverage is limited, especially for older adults, and a lack of affordable dental care was a key theme in interviews and focus groups. Factors that may contribute to oral health needs include poverty, as well as an unhealthy diet and consuming sugar sweetened beverages.

Key Data

Indicators

Percent of Adults with Poor Dental Health²



"We have plenty of dentists but hardly anyone that takes public insurance."

– Interviewee

Percent of Adults without Dental Exam in the last 12 months³



Percent of Youth 2-11 without Dental Exam in the Past 12 Months⁴



"A huge problem in the senior population is oral health because it is not a benefit of Medicare. While some can access Medi-Cal, there are still fragile seniors (across all income levels) in facilities, and oral health is often not a priority for them, so there is rapid decline in good oral/dental health...Can extrapolate dental issues to other health issues."

– Interviewee

In 2014, **51%** of kindergarteners and 3rd graders had tooth decay.⁵

Key Themes from Qualitative Data

- Dentists have low reimbursement rates
- Lack of providers who accept Denti-Cal
- Lack of focus on early prevention of oral health problems
- Lack of education about nutrition among parents and children
- Driven by poor health behaviors such as poor nutrition, smoking, and substance use
- School absenteeism is related to teeth problems and dental pain

*Unstable estimate; findings should be interpreted with caution.

Note: California state average estimates are included for reference. Differences between Sonoma County and California state estimates are not necessarily statistically significant.

Oral Health (continued)



Key Drivers

Driver: Access to Care

Access to Providers

Dentists, Rate per 100,000 population⁶

85.9 | 77.5

Sonoma

California

Access to Providers Accepting
Medi-Cal Dental Insurance

*Provider-to-Beneficiary Ratio for Dental Service
Offices and Providers Willing to Accept New Medi-
Cal Patients as of December 2013⁷*

1: 2,155

Sonoma

Dental Insurance Coverage

Lack of Dental Insurance, Adult

*% adults without no dental insurance in past
year^{8,†}*

38.9

Sonoma

Driver: Access to Care- Seniors

Lack of Dental Insurance, Older
Adult

% of adults age 65+ without dental insurance^{9,†}

51.8

Sonoma

Driver: Access to Care- Children

Children Unable to Afford Dental Care

*% of population age 5-17 who self-report that
during the past 12 months, there was any time
when they needed dental care but could not afford
it¹⁰*

10.4* | 6.3

Sonoma

California

Driver: Health Behaviors

Children's Consumption of Sugar-
Sweetened Beverages

*% of children age 2-13 consuming 1+ sugary
drink (other than soda) in previous day¹¹*

22.4 | 21.2

Sonoma

California

Driver: Social and Economic Risk

Children in Poverty

*% of children under age 18 living below 100% of
Federal Poverty Level¹²*

12.8 | 22.7

Sonoma

California

Population in Poverty

*% of population living below 100% of Federal
Poverty Level¹³*

7.9 | 10.6

Sonoma

California

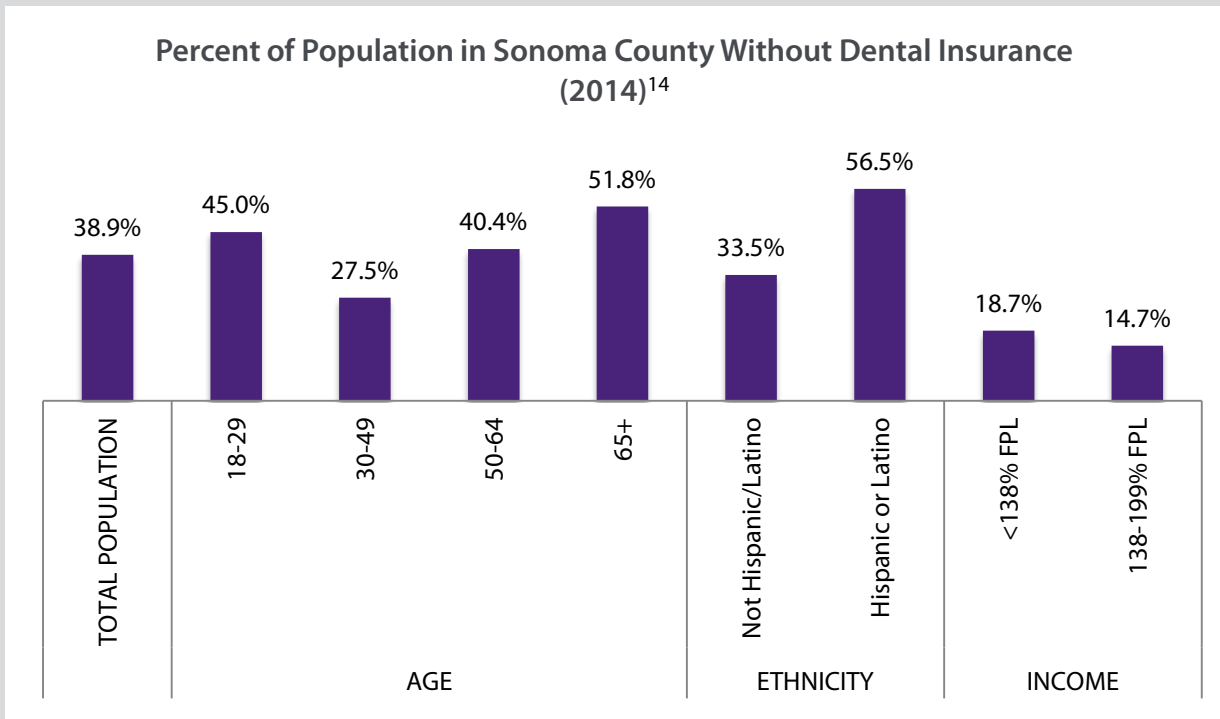
* Unstable estimate; findings should be interpreted with caution.

† State data not publically available at time of report preparation.



Oral Health (continued)

Populations Disproportionately Affected



Primary and secondary data indicate that oral health care is especially hard to access for children and older adults, Latino families, and those living in poverty. Secondary data reveal that communities lacking dental insurance tend to reflect those that have not had a recent dental visit, though a few exceptions exist:

- Adults 18 to 64 years, males, and adults with less than a high school education (proxy for income) were the most likely to have not visited the dentist or a dental clinic in the last year.
- Adults 18 to 64 years (31.4%) were significantly more likely to have not visited the dentist or a dental clinic in the last year when compared to adults 65 years and older (15.7%).
- Males (33.9%) were significantly more likely to have not visited the dentist or a dental clinic in the last year when compared to females (21.7%).
- Adults with less than a high school education (55.4%) were significantly more likely to not have visited the dentist or a dental clinic in the last year.

Oral Health (continued)



Assets

Examples of Existing Community Assets[†]

Dental Health Network



Community Health Clinics and
Dental Health Clinics at Federally
Qualified Health Centers



School Smiles Program
and WIC Dental Days



[†] Assets and recommendations excerpted from qualitative data and SC CHNA Collaborative. For a comprehensive list of county assets and resources, reference <http://211sonoma.org/>.

¹ "Health Smile, Healthy You: The Importance of Oral Health," Delta Dental Insurance, accessed October 28, 2015, https://www.deltadentalins.com/oral_health/dentalhealth.html

² Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES, 2006-10.

³ University of California Center for Health Policy Research, California Health Interview Survey, 2013-14.

⁴ University of California Center for Health Policy Research, California Health Interview Survey, 2013-14.

⁵ Sonoma County Smile Survey, 2014.

⁶ US Department of Health & Human Services, Health Resources and Services Administration, Area Health Resource File, 2013.

⁷ California State Auditor's analyses of data from systems administered by the California Department of Health Care Services, including the California Dental Medicaid Management Information System, the California Medicaid Management Information System, and the Fiscal Intermediary Access to Medi-Cal Eligibility system, 2013.

⁸ Sonoma County Local Health Department File, California Health Interview Survey, 2013-14.

⁹ Ibid.

¹⁰ California Health Interview Survey, 2007.

¹¹ California Health Interview Survey, 2013-14.

¹² US Census Bureau, American Community Survey, 2014.

¹³ Ibid.

¹⁴ Sonoma County Local Health Department File, California Health Interview Survey, 2013-14.



Access to Health Care

Access to comprehensive, affordable, quality physical and mental health care is critical to the prevention, early intervention, and treatment of health conditions. With implementation of the Affordable Care Act (ACA), many previously uninsured adults in Sonoma County are able to access insurance coverage and access regular healthcare. Secondary data demonstrate that insurance coverage and access to physicians are better than California, but this health need was raised as an issue in Sonoma County because focus group and interview participants strongly indicated that other barriers to access persist. Specifically, there are not enough primary care providers to meet medical need and barriers such as transportation mean that not all Sonoma County residents are able to access available health care resources.

Key Data

Indicators

Access to Primary Care Physicians¹

Rate Per 100,000 Population



Percent of Adults with a Usual Source of Care²

HP 2020 Goal: ≥ 89.4



Access to Mental Health Providers³

Rate Per 100,000 Population



"The ACA was great for a lot of people not having insurance... The bad news is that we have a **shortage of primary healthcare providers**, whether that's a doctor or nurse practitioner or physician assistant or nurse or medical assistant. There's a huge demand."

– Interviewee

"**There aren't enough primary care providers** so there are delays that occur. In terms of the ability to be able to get a primary care visit, I think that's better. [However], do we have enough providers overall in the county?"

–Interviewee

Key Themes from Qualitative Data

- Lack of primary health care providers
- Community health centers are unable to meet high demands
- Limited access to reproductive care
- Lack of documentation is a barrier to receiving care
- Even with ACA, insurance premiums are too high for some residents
- Need for preventive care to avoid Emergency Rooms

Note: California state average estimates are included for reference. Differences between Sonoma County and California state estimates are not necessarily statistically significant.



Access to Health Care (continued)

Supporting Data and Key Drivers

Supporting Data

Lack of Primary Care Professionals
% of population living in a primary care health professional shortage area^{4,†}

11.2 | 25.2
Sonoma | California

"I'm concerned that the bigger question is, even if [people] have access to insurance, do they know how to use it, to access the care delivery system in a way that really optimizes their health and well-being?" -Interviewee

Driver: Insurance

Uninsured Population, Adult
% of population without health insurance (age 18-64)⁵

14.3 | 17.3
Sonoma | California

Uninsured Population, Youth
% of child population (<age 19) without health insurance⁶

4.1 | 5.4
Sonoma | California

Insured Population Receiving Medi-Cal
% of insured population receiving Medi-Cal⁷

18.2 | 14.0
Sonoma | California

Supporting Data: Indicators of Health Care Access and/or Utilization

Breast Cancer Screening
% of female Medicare enrollees with mammogram in past 2 years⁸

80.5 | 83.9
Sonoma | California

Pap Test
% of females age 18+ with regular pap test (age-adjusted)⁹

80.3 | 78.3
Sonoma | California

Colon Cancer Screening
% of adults age 50+ who self-report ever having had a sigmoidoscopy or colonoscopy (age-adjusted)¹⁰

55.5 | 57.9
Sonoma | California

Immunized Kindergarteners
% of kindergarteners with all required immunizations¹¹

90.0 | 90.4
Sonoma | California

Vaccinated Older Adults
% of adults age 65+ who have ever received a pneumonia vaccination¹²

65.2 | 63.4
Sonoma | California

Preventable Hospital Events
Age-adjusted discharge rate per 10,000 population^{13,††}

56.7 | 83.2
Sonoma | California

† Primary Care Health Professional Shortage Area (HPSA) is defined as an area with 3,500 or more people per primary care physician (U.S. Department of Health and Human Services, <http://www.hrsa.gov/shortage/>). As a note, there is no generally accepted ratio of physician to population ratio. Care needs of an individual community will vary due to a myriad of factors. Additionally, this indicator does not take into account the availability of additional primary care services provided by Nurse Practitioners and Physician Assistants in an area.

†† This indicator reports the patient discharge rate for conditions that are ambulatory care sensitive (ACS). ACS conditions include pneumonia, dehydration, asthma, diabetes, and other conditions which could have been prevented if adequate primary care resources were available and accessed by those patients.



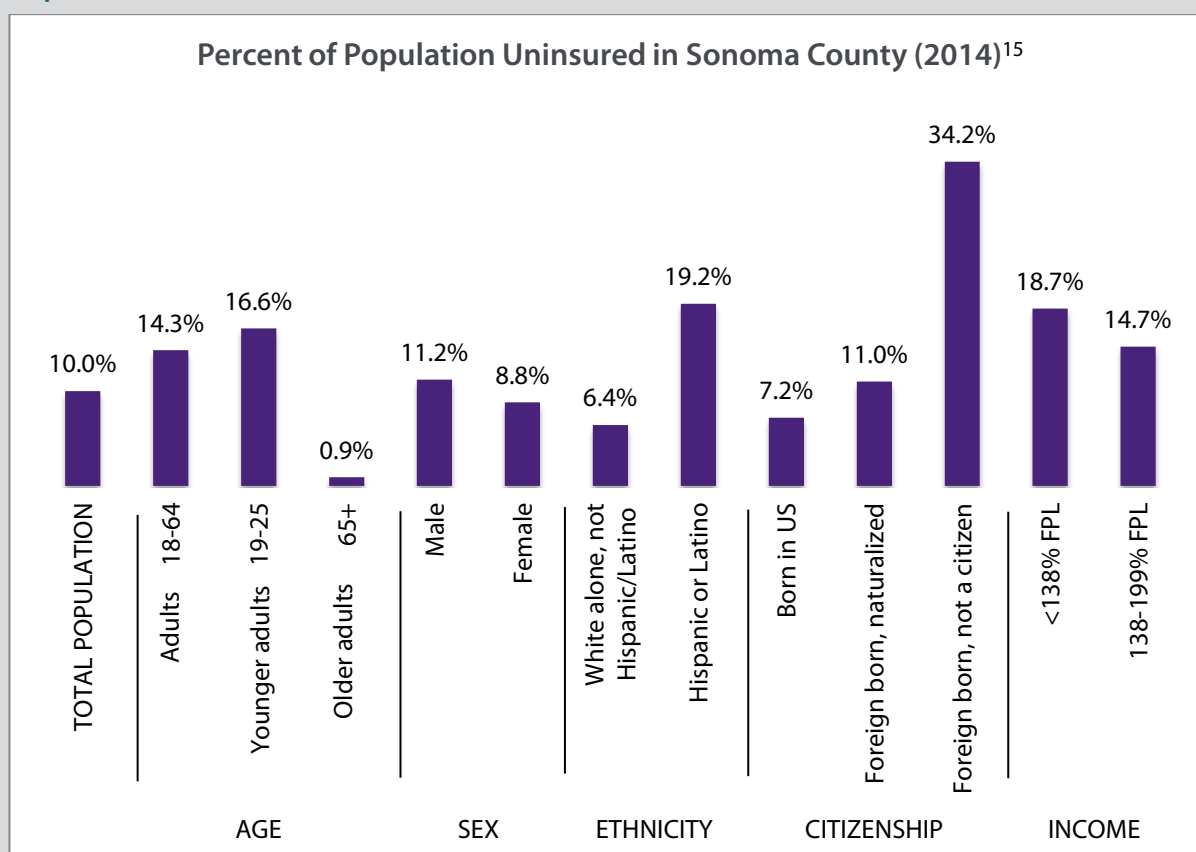
Access to Health Care (continued)

Populations Disproportionately Affected

Geographic Areas with Greatest Risk

Focus group participants noted that Federally Qualified Health Centers seem unable to meet high demands and that transportation is a substantial access issue given the size of the county. One interviewee also noted that many health professionals are leaving health centers in favor of private for-profit hospitals.

Populations with Greatest Risk



Age disparities

Focus group participants noted that there are few geriatricians in Sonoma County and that older adults face transportation barriers when trying to access care.

Other disparities

Interview respondents noted that the undocumented population and lower income residents are less able to access care.



Access to Health Care (continued)

Assets and Ideas

Examples of Existing Community Assets[†]

Medi-Cal Outreach and Support



County / Community Collaboration



Community Clinics / Mobile Clinics



Ideas from Focus Group and Interview Participants[†]

- Provide on-site support for residents to access Medi-Cal providers that are taking referrals
- Implement innovative approaches for patient outreach and linkage to services
- Increase the number of health education and outreach events
- Develop more clinics or community health centers
- Increase services and availability of providers near where people live

[†] Assets and recommendations excerpted from qualitative data and SC CHNA Collaborative. For a comprehensive list of county assets and resources, reference <http://211sonoma.org/>.

¹ US Department of Health & Human Services, Health Resources and Services Administration, Area Health Resource File, 2012.

² California Health Interview Survey, 2014.

³ University of Wisconsin Population Health Institute, County Health Rankings, 2014.

⁴ US Department of Health & Human Services, Health Resources and Services Administration, Health Resources and Services Administration, 2015.

⁵ US Census Bureau, American Community Survey, 2014.

⁶ Ibid.

⁷ Ibid.

⁸ Dartmouth College Institute for Health Policy & Clinical Practice, Dartmouth Atlas of Health Care, 2012.

⁹ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US Department of Health & Human Services, Health Indicators Warehouse, 2006-12.

¹⁰ Ibid.

¹¹ California Department of Public Health Immunization Branch, Immunization Branch, Kindergarten Assessment Results, 2014-15.

¹² Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System, 2006-12.

¹³ California Office of Statewide Health Planning and Development, OSHPD Patient Discharge Data. Additional data analysis by CARES, 2011.

¹⁴ US Census Bureau, American Community Survey, 2014.



Mental Health

Mental health includes emotional, behavioral, and social well-being. Poor mental health, including the presence of chronic toxic stress or psychological conditions such as anxiety, depression or Post-Traumatic Stress Disorder, has profound consequences on health behavior choices and physical health.^{1,2} This area was identified as a health need due to the high suicide rate, percent of youth reporting harassment or bullying at school, and percent of adult population likely experiencing poor mental health, and because mental health was a key concern among community members and other key stakeholders. Interviewees noted that the psychology of poverty, including living day-to-day and struggling to provide basic needs, can negatively impact one's ability to make long-term plans. Mental health issues frequently co-occur with substance abuse. Youth, and residents experiencing homelessness, were noted as particularly high risk populations for mental health concerns.

Key Data

Indicators

Suicide Rate³

Age-adjusted; Per 100,000 Population

HP 2020 Goal: ≤ 10.2



Youth Hospitalization for Mental Health Issues⁴

Rate Per 1,000 Youth Age 5-19



Percent of Adult Population Likely Experiencing Serious Psychological Distress in Past Year^{5,†}



"We see it in the hospital environment ... In the emergency department, what we see are those individuals who have mental health issues that are acute and the only place they can go is the emergency department... There's no place for them to go... That's the symptom. The problem is there's not the kind of primary mental healthcare that's sufficient to connect these people into a network of care so that these **acute crises are prevented, rather than being the only thing that we provide treatment for.**"

– Interviewee

"Helping **children in their mental health and their family's mental health** is really important and not always easy to access services for."

– Interviewee

Key Themes from Qualitative Data

Access to mental health care

- Limited resources
- Need for culturally competent & trauma informed care



Resistance

- Associated stigma

Awareness

- General need for information
- Limited prevention & screening

Trauma/PTSD as a result of violence

- Family violence/individual adverse events
- Community violence

†Psychological distress is measured using the K6, a mental health screener that asks respondents how often they feel sad, worthless, hopeless, nervous, restless, or whether everything is an effort.

Note: California state average estimates are included for reference. Differences between Sonoma County and California state estimates are not necessarily statistically significant.



Mental Health (continued)

Supporting Data and Key Drivers

Supporting Data

Depression, Older Adults
% of Medicare beneficiaries with depression⁶

14.1 | 13.4
Sonoma | California

Depression, Youth
% of 11th grade students who felt sad or hopeless almost every day for 2 weeks or more⁷

31.3 | 32.5
Sonoma | California

Mentally Unhealthy Days, Adults
Number of days self-reported mental health (e.g., stress, depression, problems with emotions) "not good" in past 30 days⁸

3.4 | 3.6
Sonoma | California

Driver: Access to Mental Health Care

Adults Needing Treatment
% of adults reporting need for treatment for mental health, or use of alcohol/drug⁹

15.2 | 15.9
Sonoma | California

Mental Health Providers
Rate of mental health providers per 100,000 population¹⁰

159.2 | 157.0
Sonoma | California

Driver: Social Support and Stress

Social Support, Adult
% adults without adequate social / emotional support (age-adjusted)¹¹

18.7 | 24.6
Sonoma | California

Bullying, Youth
% of 11th grade students reporting harassment or bullying on school property within the past 12 months for any reason¹²

29.0 | 28.0
Sonoma | California

"In our world, what we're **battling** is **social issues**, and that includes things like bullying, respect, and how to have healthy relationships, manage your frustration and anger. The crux is, **if we had mental health support**, we'd probably have a reduction in mental health [issues] because people would learn healthier ways to manage stress."

– Interviewee

"We do know that **experiencing trauma, either as a child or an adult, has lasting effects on your physical health and wellbeing**... there is a significant gap in mental health services in our county, and also in the therapy we provide to children and adults around violence and living a violence free lifestyle. We meet people in a number of different stages in their healing from a violent episode."

– Interviewee

Driver: Social and Economic Risks

Exposure to Violence
Violent crime rate per 100,000 population¹³

366.3 | 425.0
Sonoma | California

Exposure to Poverty
% population with income at or below 200% Federal Poverty Line¹⁴

29.6 | 36.4
Sonoma | California

Homelessness
Point in time homeless count in Sonoma County¹⁵

3,107

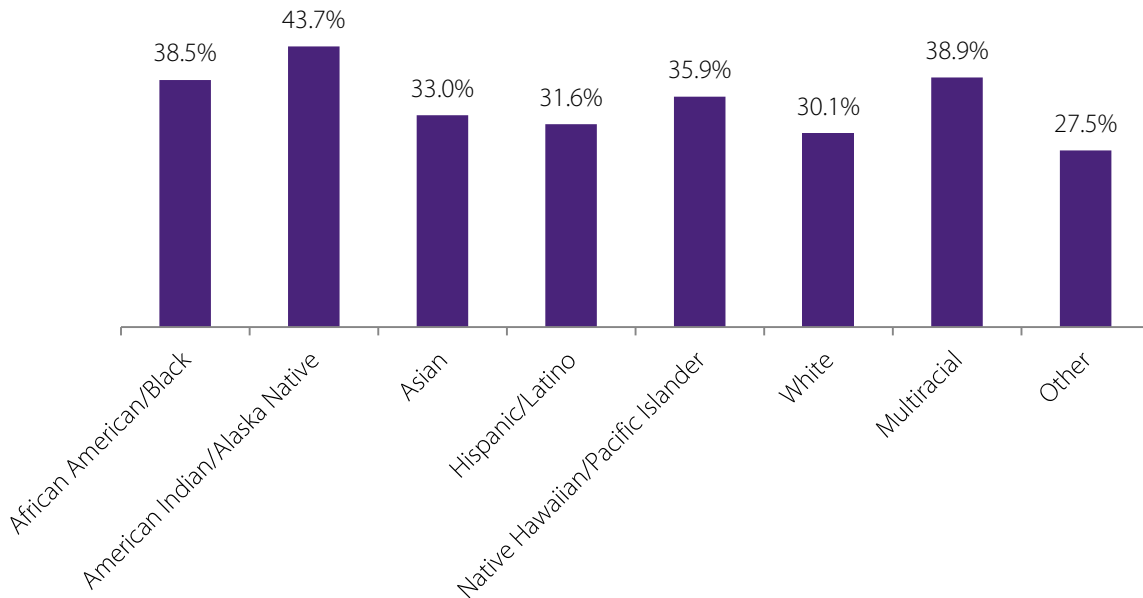


Mental Health (continued)

Populations Disproportionately Affected, Assets, and Ideas

Populations with Greatest Risk

Youth Bullying and Harassment in Sonoma County by Race/Ethnicity¹⁶



Among youth in grades 7, 9, 11, and non-traditional students, higher percentages of American Indian/Alaska Native, African American/Black, and multiracial students report being harassed or bullied at school for any reason in the past 12 months.

Examples of Existing Community Assets[†]

Behavioral Health Crisis Response Services



Collaboration Between County and Community Partners



Community Health Clinics



Ideas from Focus Group and Interview Participants[†]

- Increase awareness of the impacts of stress and trauma
- Provide trauma-informed services
- Integrate mental health care into existing systems (e.g., schools)
- Improve care coordination
- Strengthen early intervention and prevention

[†] Assets and recommendations excerpted from qualitative data and SC CHNA Collaborative. For a comprehensive list of county assets and resources, reference <http://211sonoma.org/>.

- ¹ Chapman DP, Perry GS, Strine TW. "The Vital Link Between Chronic Disease and Depressive Disorders," Preventing Chronic Disease, 2005; 2(1):A14.
- ² Felitti VJ, Anda RF, Nordenberg D, Williamson DF, Spitz AM, Edwards V, Koss MP, Marks JS, "Relationship of Childhood Abuse and Household Dysfunction to Many of the Leading Causes of Death in Adults: the Adverse Childhood Experiences (ACE) Study." American Journal of Preventive Medicine ,1998; 14:245–258.
- ³ University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data, 2010-12.
- ⁴ Special tabulation by the State of California, Office of Statewide Health Planning and Development (Sept. 2015); California Dept. of Finance, Race/Ethnic Population with Age and Sex Detail, 2000-2010, 2010-2060 (Sept. 2015). Data Year: 2014.
- ⁵ University of California Center for Health Policy Research, California Health Interview Survey, 2014.
- ⁶ Centers for Medicare and Medicaid Services, 2012.
- ⁷ California Healthy Kids Survey, 2011-13.
- ⁸ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse, 2006-12.
- ⁹ University of California Center for Health Policy Research, California Health Interview Survey, 2014.
- ¹⁰ University of Wisconsin Population Health Institute, County Health Rankings, 2014.
- ¹¹ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. U.S. Department of Health & Human Services, Health Indicators Warehouse, 2006-12.
- ¹² California Healthy Kids Survey, 2011-13.
- ¹³ Federal Bureau of Investigation, FBI Uniform Crime Reports. Additional analysis by the National Archive of Criminal Justice Data. Accessed via the Inter-university Consortium for Political and Social Research, 2010-12.
- ¹⁴ U.S. Census Bureau, American Community Survey, 2014.
- ¹⁵ "Sonoma County Homeless Point-In-Time Census & Survey Comprehensive Report," Sonoma County Taskforce for the Homeless, 2015.
- ¹⁶ California Healthy Kids Survey, 2011-13.



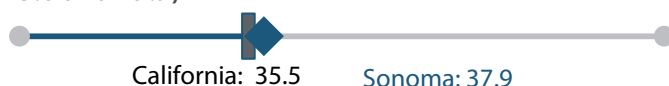
Obesity and Diabetes

Overweight and obesity are strongly related to stroke, heart disease, some cancers, and type 2 diabetes. These chronic diseases represent some of the leading causes of death nationwide.¹ Although the indicators for obesity and diabetes within Sonoma County are below the California state benchmark, there is a high prevalence of adults and youth who are overweight and obese. Primary and secondary data indicate that access to affordable healthy food is limited, and lack of physical activity may be driven in part by a lack of affordable exercise options. Racial disparities in obesity and overweight, as well as in access to healthy food are also a concern among community residents, particularly in Santa Rosa and in the city of Sebastopol.

Key Data

Indicators

Percent of Adults Who Are Overweight (BMI between 25.0 and 29.9)²



Percent of Youth (Grades 5, 7, 9) Who Are Obese^{3, †}



Stroke Mortality Rate⁴

Age-Adjusted; Per 100,000 Adult Population

HP 2020 Goal: ≤ 34.8



"When food budget goes down because rent is getting higher, people need to find money some place, places they will cut is food and recreation."

– Interviewee

"People come to the health center to see their doctors 2-4 times a year, but **they are making decisions about their health every day**... By the time you get to the doctor's you've already failed, right. It's essential to provide healthcare, but there's so much more to creating health."

– Interviewee

Key Themes from Qualitative Data

Poor nutrition

- High cost of living cuts into food budget
- Busy lifestyles prevent healthy living
- Healthy food options are expensive



Lack of physical activity

- Constant connection to technology
- Lack of reliable transportation to safe places to bike, walk, or hike
- Lack of affordable exercise options



[†] Body composition is determined by skinfold measurements or bioelectrical impedance analysis for the calculation of percent body fat and/or Body Mass Index (BMI) calculation. The percent body fat "high risk" threshold is 27.0%-35.1% for boys and 28.4%-38.6% for girls, depending on age. The BMI "high risk" threshold is 17.5-25.2 for boys and 17.3-27.2 for girls, depending on age. These measures are based on the CDC's BMI-for-age growth charts, which define an individual as obese when his or her weight is "equal to or greater than the 95th percentile".

Note: California state average estimates are included for reference. Differences between Sonoma County and California state estimates are not necessarily statistically significant.



Obesity and Diabetes (continued)

Supporting Data and Key Drivers

Supporting Data: Related Health Outcomes

Diabetes Mortality (adult)

Age-adjusted mortality rate per 100,000 pop.⁵

18.2 | 20.8

Sonoma

California

Heart Disease Prevalence (adult)

% of adults ever diagnosed with heart disease⁶

9.0 | 6.1

Sonoma

California

Obese Adults

% of adults with BMI greater than 30.0⁷

25.4 | 27.0

Sonoma

California

Adults with Diabetes

% of adults ever diagnosed with diabetes⁸

8.4 | 8.9

Sonoma

California

Ischemic Heart Disease Prevalence
(Medicare enrollees)

% of Medicare fee-for-service population⁹

23.7 | 26.1

Sonoma

California

Overweight Youth

% of 5,7,9 grade with "needs improvement"
for body composition¹⁰

20.0 | 19.3

Sonoma

California

Driver: Nutrition

Youth Consumption of Fruits and
Vegetables

% youth age 2-13 consuming <5 servings of fruit
and vegetables¹¹

30.2 | 48.4

Sonoma

California

Special Supplemental Nutrition
Program for Women, Infants and
Children (WIC) Authorized Food
Stores

% of food stores authorized to accept Special
Supplemental Nutrition Program for Women,
Infants and Children (WIC) program benefits
per 100,000 population¹²

14.8 | 15.8

Sonoma

California



Adult Consumption of Fast Food

% of adults consuming fast food >2 times in
past week¹³

12.2 | 22.3

Sonoma

California

Grocery Stores

Grocery stores per 100,000 population¹⁴

28.1 | 21.5

Sonoma

California

Fast Food Establishments

Fast food establishments per 100,000
population¹⁵

61.6 | 74.5

Sonoma

California



Obesity and Diabetes (continued)

Driver: Physical Activity

Health Behaviors

% adults with no leisure time activity¹⁶

12.8 | 16.6
Sonoma | California

"I see all of us plugged in all the time. [...] This impacts physical fitness, relationships with families and friends, work-life balance, spiritual practices, mental health, and well-being overall."
– Interviewee

Physical Environment

% population living ½ mile from a park¹⁷

58.1 | 58.6
Sonoma | California

% youth in grades 5,7,9 with "high risk" or "needs improvement" aerobic capacity¹⁸

32.0 | 35.9
Sonoma | California

Recreation and fitness centers per 100,000 population^{19,†}

12.6 | 8.7
Sonoma | California

Driver: Clinical Care

Diabetes Management

% diabetic Medicare patients with HbA1c test in past year^{20,††}

82.0 | 81.5
Sonoma | California

Driver: Social and Economic Risks

Food Insecurity

% population experiencing food insecurity (i.e., the household-level economic and social condition of limited or uncertain access to adequate food)²¹

13.4 | 16.2
Sonoma | California

Poverty and Food Access

% of population living in a 'food desert' with low food access^{22,†††}

17.0 | 14.3
Sonoma | California

† Fitness and recreation centers (defined by North American Industry Classification System (NAICS) code 713940) are establishments primarily engaged in operating fitness and recreational sports facilities featuring exercise and other active physical fitness conditioning or recreational sports activities, such as swimming, skating, or racquet sports. The method used to identify recreational facilities in the County Business Patterns data does not include YMCAs and intramural/amateur sports clubs, both of which may be important venues for physical activity, especially for low- and middle-income community members. Furthermore, this measure does not account for the opportunity to engage in fitness activities in parks or other public areas.

†† Hemoglobin A1c (HbA1c) test is a blood test which measures blood sugar levels and is used for diabetes management.

††† This indicator reports the percentage of the population living in areas designated as food deserts. A food desert is defined as a low-income census tract where a substantial number or share of residents has low access to a supermarket or large grocery store. For more information on this calculation, see:

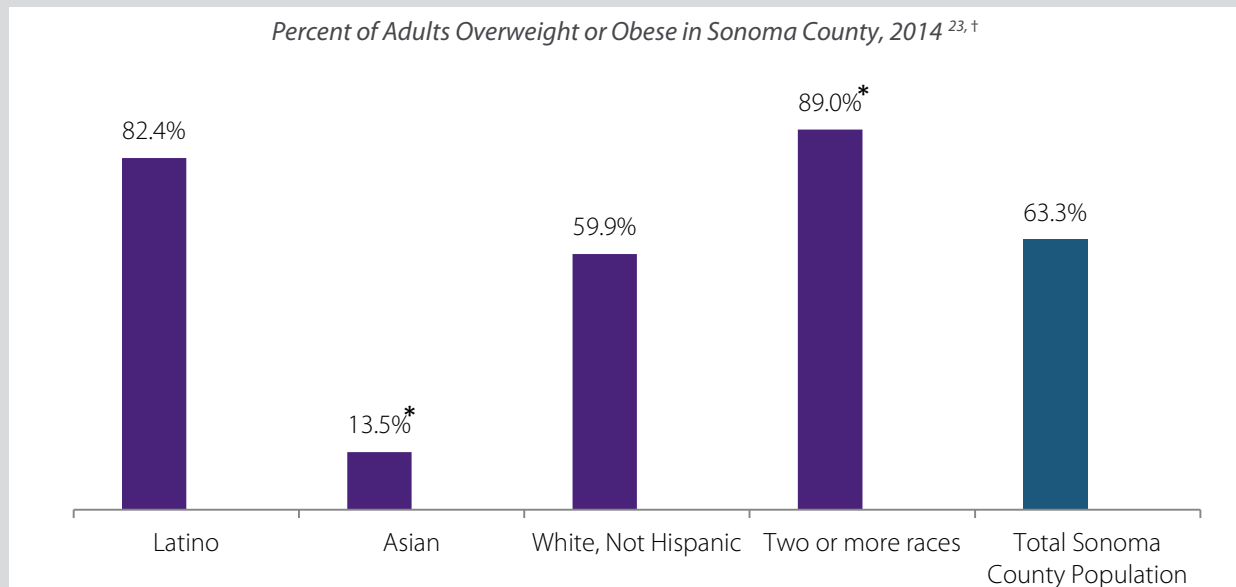
http://www.ers.usda.gov/datafiles/Food_Access_Research_Atlas/Download_the_Data/Current_Version/documentation.pdf.



Obesity and Diabetes (continued)

Populations Disproportionately Affected

Populations with Greatest Risk



† Data for African American, American Indian, Native Hawaiian/Pacific islander suppressed due to low numbers.

*Unstable county estimate; findings should be interpreted with caution.

Data demonstrate racial/ethnic disparities in the percent of adults overweight or obese, with over 80 percent of people of two or more races and Latino people with a Body Mass Index that is considered unhealthy, compared to approximately 60 percent of white non-Hispanic people and 13 percent of Asian people.

In addition, interviewees noted a high prevalence of diabetes among Hispanic/Latino populations.

Geographic Areas with Greatest Risk

Interviewees and focus group participants noted that healthy food options are lacking particularly south of Santa Rosa and in the city of Sebastopol.



Obesity and Diabetes (continued)

Assets and Ideas

Examples of Existing Community Assets[†]

Food Banks



Farmer's Markets



Parks and Recreations



Ideas from Focus Group and Interview Participants[†]

- Create community gardens
- Offer subsidies for local farmers who produce fruits and vegetables
- Increase health fairs
- Increase accessible parks and walking paths

[†] Assets and recommendations excerpted from qualitative data and SC CHNA Collaborative. For a comprehensive list of county assets and resources, reference <http://211sonoma.org/>.

¹ "Obesity Health Risks," Harvard School of Public Health, Obesity Prevention Source, accessed November 2015, <http://www.hsph.harvard.edu/obesity-prevention-source/obesity-consequences/health-effects/>.

² California Health Interview Survey, 2014.

³ California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-14.

⁴ University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data, 2010-12.

⁵ California Department of Public Health, 2011-13.

⁶ California Health Interview Survey, 2014.

⁷ Ibid.

⁸ California Health Interview Survey, 2014.

⁹ Centers for Medicare and Medicaid Services, 2012.

¹⁰ California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-14.

¹¹ California Health Interview Survey, 2011-12.

¹² US Department of Agriculture, Economic Research Service, USDA - Food Environment Atlas, 2011.

¹³ University of California Center for Health Policy Research, California Health Interview Survey, 2014.

¹⁴ US Census Bureau, County Business Patterns. Additional data analysis by CARES, 2011.

¹⁵ Ibid.

¹⁶ Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2012.

¹⁷ US Census Bureau, Decennial Census. ESRI Map Gallery, 2010.

¹⁸ California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-14.

¹⁹ US Census Bureau, County Business Patterns. Additional data analysis by CARES, 2012.

²⁰ Dartmouth College Institute for Health Policy and Clinical Practice, Dartmouth Atlas of Health Care, 2012.

²¹ Feeding America. Child Food Insecurity Data, 2012.

²² US Department of Agriculture, Economic Research Service, USDA - Food Access Research Atlas, 2010.

²³ California Health Interview Survey, 2014.

Substance Abuse



The use or abuse of tobacco, alcohol, prescription drugs, and illegal drugs can have profound personal and public health consequences. Substance abuse was identified as a health need of concern in multiple existing data sources, as well as in interviews and focus groups. For example, the percent of youth and adults reporting heavy alcohol consumption and the percent of youth reporting marijuana use is higher for Sonoma County than California overall, as are the percent of adults who report having experienced four or more adverse childhood events before age 18, which is a risk factors for substance abuse in adulthood. In addition to youth, community members experiencing homelessness were noted as populations of high risk.

Key Data

Indicators

Percent of Adults Smoking Cigarettes¹

Age-Adjusted



Percent of Adults Reporting Heavy Alcohol Consumption^{2,3}

Age-Adjusted



Liquor Store Access^{4,†}

Rate Per 100,000 Population



“[If] you think about substance abuse, smoking, drinking, overeating, and indiscriminate sexual behavior—these are adaptive [behaviors]. If I have overwhelming feelings of anxiety and frustration and pent up stress, I get a release from those kinds of activities. But over time these behaviors have significant health implications...I worry that as a society we are trying to treat our way out of this stuff.”

-Interviewee

Key Themes from Qualitative Data

- High substance use rates among youth
- Marijuana use and smoking tobacco among youth
- Patterns of substance use among families
- Adult alcohol binge drinking (less binge drinking among youth, however)
- Prescription drug abuse as well as opioid abuse/ overdose
- Link between homelessness and substance use

† A liquor store is defined by North American Industry Classification System (NAICS) Code 445310 as a business primarily engaged in retailing packaged alcoholic beverages, such as beer, wine, and spirits.

Note: California state average estimates are included for reference. Differences between Sonoma County and California state estimates are not necessarily statistically significant.

Substance Abuse (continued)



Supporting Data and Key Drivers

Supporting Data: Substance Use Among Youth

Tobacco Use, Youth

% of 11th graders using cigarettes any time within the last 30 days⁵

13.8 | 10.2
Sonoma | California

Drinking and Driving, Youth

% of 11th grade students reporting driving after drinking (respondent or by friend)⁶

HP 2020 Goal: ≤ 25.5

24.4 | 25.0
Sonoma | California

Alcohol Use, Youth

% of youth 12 to 17 years of age reporting binge drinking within the last 30 days⁷

4.6* | 3.4
Sonoma | California

Marijuana Use, Youth

% of 11th grade students reporting marijuana use within the last 30 days⁸

28.0 | 22.0
Sonoma | California

Risk Factor: Adverse Childhood Experiences and Social Support

Adverse Childhood Experiences

% of adults that have experienced 4+ Adverse Childhood Experiences (ACEs) before age 18⁹

22.0 | 16.7
Sonoma/Napa | California
(combined for stability)

Social Support, Adults

% adults without adequate social / emotional support (age-adjusted)¹⁰

18.7 | 24.6
Sonoma | California

Key Themes About Drivers

- Stress and anxiety
- Lack of or poor coping mechanisms and skills
- Depression
- Accepted community norms/socially acceptable behaviors
- For older adults, lack of medication management related to substance abuse
- Easy access to marijuana and social norms around marijuana use
- Homelessness as a driver of substance abuse (also vice versa, substance abuse as a driver of homelessness)

“There’s a growing drug and alcohol problem in high school. The downside of being in a wealthy community is that kids can buy pills. Pill abuse is rising.”

-Interviewee

* Unstable estimate; findings should be interpreted with caution.

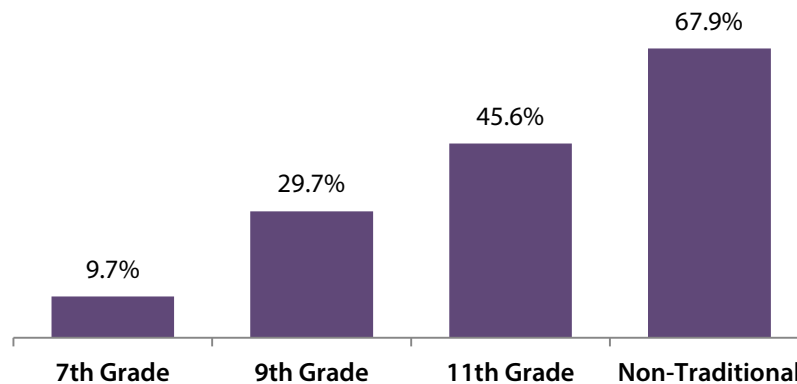
Substance Abuse (continued)



Populations Disproportionately Affected

Populations with Greatest Risks

Percent of Youth in Sonoma County Reporting Alcohol/Illegal Drug Use in the Past Month, by Grade^{11,†}



As the chart above demonstrates, the percentage of youth that use alcohol and/or illegal drugs increases as youth age and progress through high school, and usage of alcohol and/or illegal drugs is highest among non-traditional students.

“There are not enough substance abuse resources, or housing for people with substance abuse disorders. We try to use existing resources, but there are not enough of them. Increased investment in those services would help us help more young people. Counselors, those that do take Medi-Cal and take on transition-age youth are precious to us. They change lives. There aren’t enough of them.”

– Interviewee

Interviewees and focus group attendees noted a lack of substance abuse resources throughout the County, specifically for older adults and people with disabilities.

“We are a wine growing county, so I don’t know how that all fits into [the] balance. We do a pretty good job of managing social responsibility of drinking for adults, but for juveniles, not so much.”

– Interviewee

[†] “Non-Traditional” students are those enrolled in Community Day Schools or Continuation Education; according to Ed-Data, these schools make up about 10% of all public schools in California. Use caution in interpreting these data, as the term “gang” has varying definitions and it was not defined in the survey.

Substance Abuse (continued)



Assets and Ideas

Examples of Existing Community Assets[†]

Coalitions and Partnerships



Treatment and Rehabilitation Centers



Prevention Programs



Ideas from Focus Group and Interview Participants[†]

Prevention and Education

- Provide prevention education at an early age, including coping skills and stress management
- Strengthen drunk driving prevention
- Provide resources for general identification and prevention of substance use issues

Substance Abuse Treatment

- Increase housing resources for people dealing with substance use issues
- Address the need for integrated health and human services
- Establish alcohol rehabilitation centers
- Continue to expand access to substance abuse treatment through Medi-Cal drug program

Policy Change

- Increase tobacco prices
- Increase purchase age to buy cigarettes from 18 to 21
- Curb cigarette distribution near schools
- Establish policies to curb marijuana growers from growing in residential areas
- Consider establishing a county ordinance around social drinking

[†] Assets and recommendations excerpted from qualitative data and SC CHNA Collaborative. For a comprehensive list of county assets and resources, reference <http://211sonoma.org/>.

¹ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System Warehouse, 2006-12.

² Ibid.

³ This indicator reports the percentage of adults age 18 and older who self-report heavy alcohol consumption, which is defined as more than two drinks per day on average for men and one drink per day on average for women.

⁴ US Census Bureau, County Business Patterns. Additional data analysis by CARES, 2012.

⁵ California Healthy Kids Survey, 2011-13.

⁶ Ibid.

⁷ California Health Interview Survey, 2013-14.

⁸ Ibid.

⁹ A Hidden Crisis: Findings on Adverse Childhood Experiences in California, Center for Youth Wellness, 2008-13.

¹⁰ Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via Warehouse. U.S. Department of Health & Human Services, Heal

¹¹ California Department of Education, California Healthy Kids Survey and California Student Survey (WestEd)



Violence and Unintentional Injury

Injury and violence prevention are broad topics that cover many issues including motor vehicle accidents, drowning, overdose, and assault or abuse, among others. This area was identified as a health need due to higher rates of assault and rape compared to California benchmarks, and because it was a key concern in focus groups and interviews. Key stakeholders identified domestic violence, gang violence, and unsafe neighborhood conditions as core issues to address in their community.

Key Data

Indicators

Assault Rate¹

Per 100,000 Population



Physical or Sexual Violence by Intimate Partner²

Percent of Adults Reporting Intimate Partner Violence After Age 18



Homicide, Age-Adjusted Mortality Rate³

Per 100,000 Population

HP 2020 Goal: ≤ 5.5



Unintentional Injury Mortality Rate⁴

Age-adjusted; Per 100,000 Population

HP 2020 Goal: ≤ 36.0



Motor Vehicle Accident Mortality Rate⁵

Age-adjusted; Per 100,000 Population

HP 2020 Goal: ≤ 12.4



"There are a lot of **community activities** going on around for violence prevention, but I don't think we are doing much at the **policy level for violence prevention**.

Even if the federal government cannot do much around gun control, we as a city could implement ordinances that would help relieve different kinds of violence."

– Interviewee

Key Themes from Qualitative Data

- Domestic violence, particularly among low-income and undocumented
- Gang violence, particularly among youth and in Santa Rosa
- Gun violence
- Homeless violence
- Unsafe conditions for pedestrians (lack of well-lit sidewalks and unsafe motorists)

Note: California state average estimates are included for reference. Differences between Sonoma County and California state estimates are not necessarily statistically significant.



Violence and Unintentional Injury^(continued)

Supporting Data

Pedestrian Accidents

Pedestrian Accident Mortality Rate
Age-Adjusted; per 100,000 population⁶

HP 2020 Goal: ≤ 1.3

1.1 | 2.0
Sonoma | California

Gang Involvement

Gang Involvement among Youth
Percentage of 11th grade students reporting
current gang involvement⁷

8.0 | 7.5
Sonoma | California

Rape

Rape
Rate per 100,000 population⁸

28.4 | 21.0
Sonoma | California

Domestic Violence and Child Maltreatment

Domestic Violence Injuries
Rate per 100,000 females age 10+^{9†}

5.9 | 9.5
Sonoma | California

Adverse Childhood Experiences (ACEs)
% of adults that have experienced 4+ Adverse
Childhood Experiences (ACEs) before age 18¹⁰

22.0 | 16.7
Sonoma/Napa | California
(combined for stability)

Substantiated Allegations of
Child Maltreatment

Per 100,000 children ages 0-17¹¹

HP 2020 Goal: ≤ 8.5

4.5 | 8.7
Sonoma | California

“Domestic violence, it’s a huge factor. Some women who are victims of domestic violence suffer because they are here undocumented, dependent on the partner to provide phones and support. Economically, it’s very **hard to escape** or have the courage to leave their abuser because they think they will be deported or homeless.”

– Interviewee

Risk Factor: Driving while Drinking

Driving while Drinking, Youth
% of 11th grade students reporting driving after
drinking (respondent or by friend)¹²

HP 2020 Goal: ≤ 25.5

24.4 | 25.0
Sonoma | California

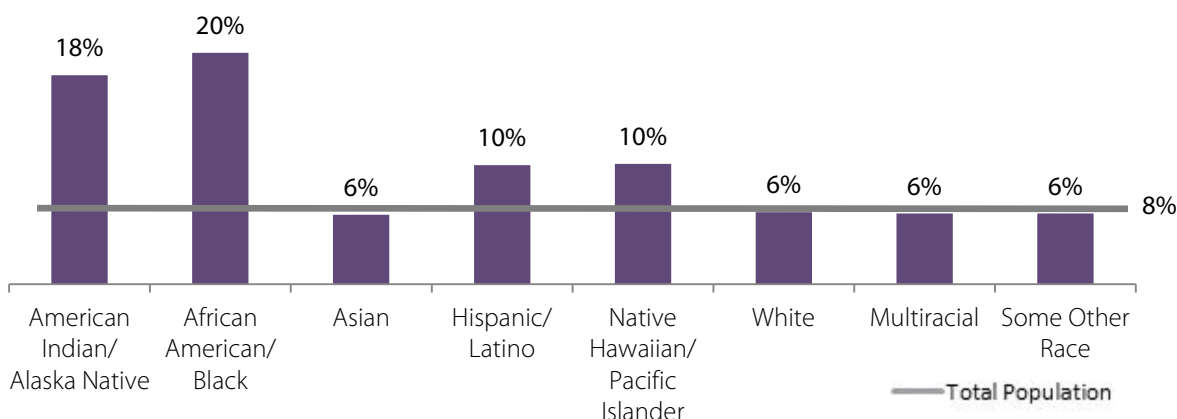
† This indicator reports the rate of non-fatal emergency department visits coded as “batter by spouse/partner” (ICD-9 classification E-9673). These rates are likely underestimates (e.g., because not all crimes are reported, and not everyone goes to the hospital for domestic violence injuries for a variety of reason).



Violence and Unintentional Injury^(continued)

Populations Disproportionately Affected

Percent of Youth in Sonoma County Reporting Gang Membership
(Grades 7, 9, 11, and non-traditional students)^{13, †}



Key themes from stakeholder interviews provided indications of some areas of the county and populations disproportionately impacted by violence:

- **Low income communities and undocumented residents** fear and mistrust of law enforcement
- Domestic violence survivors who are **geographically isolated** (some of which are undocumented)
- Sonoma County residents with a **lower socioeconomic status** experience more stress and violence

Examples of Assets and Resources^{††}

Domestic Violence Services



Strong Police Presence, Efforts Against Gang Violence



Community-level Violence Prevention Activities



Ideas from Focus Group and Interview Participants^{††}

- Provide multi-lingual services for therapy and advocacy
- Provide more training for cultural competency
- Offer training for health providers to screen for domestic violence
- Invest in facilities for victims of domestic violence, more beds, transitional housing
- Invest in education rather than jails
- Enhance street lighting for pedestrian safety
- Enact policy-level violence prevention activities
- Support community members in advocating for public safety
- Increase community leaders' comfort discussing violence, mental health
- Encourage media to discuss root causes of violence

[†] "Non-Traditional" students are those enrolled in Community Day Schools or Continuation Education; according to Ed-Data, these schools make up about 10% of all public schools in California. Use caution in interpreting these data, as the term "gang" has varying definitions and it was not defined in the survey.

- ¹ Federal Bureau of Investigation, FBI Uniform Crime Reports. Additional analysis by the National Archive of Criminal Justice Data. Accessed via the Inter-university Consortium for Political and Social Research, 2010-12.
- ² California Health Interview Survey, 2009.
- ³ University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data, 2010-12.
- ⁴ "2015 County Health Status Profiles," California Department of Public Health, 2011-13.
- ⁵ University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data, 2010-12.
- ⁶ University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data, 2010-12.
- ⁷ California Healthy Kids Survey, 2011-13.
- ⁸ Federal Bureau of Investigation, FBI Uniform Crime Reports. Additional analysis by the National Archive of Criminal Justice Data. Accessed via the Inter-university Consortium for Political and Social Research, 2010-12.
- ⁹ California Department of Public Health, EpiCenter Overall Injury Surveillance, 2011-13.
- ¹⁰ A Hidden Crisis: Findings on Adverse Childhood Experiences in California, Center for Youth Wellness, 2008-13.
- ¹¹ California Child Welfare Indicators Project, 2014.
- ¹² California Healthy Kids Survey, 2011-13.
- ¹³ District- and county-level figures are weighted proportions from the 2011-13 California Healthy Kids Survey, and state-level figures are weighted proportions from the 2011-13 California Student Survey.

Appendix B. Secondary Data, Sources, and Years
Sonoma County Community Health Needs Assessment

Health Indicators					Data Estimates					Needs Score			Data Source and Year							
Potential Health Needs	Core/ Related	Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable		
Access to Health Care		Primary Care Physicians, Rate per 100,000 Pop.	Access to Primary Care	Clinical Care	Rate	491,829	n/a	77.3	74.5	97.0	Above benchmark	State	19.73	US Department of Health & Human Services,Health Resources and Services Administration,Area Health Resource File.	2012	2012	2012			
		Percentage of Adults Without a Usual Source of Care	Lack of a Consistent Source of Health Care	Clinical Care	Percentage	n/a	n/a	16.1%	no data	10.9%	Below benchmark	State	-5.20%	California Health Interview Survey	2014		2014			
		Percent of child population without health insurance (<age 19)	n/a	Social and Economic Factors	Percentage	102,921	n/a	5.4%	6.0%	4.1%	Below benchmark	State	-1.30%	American Community Survey	2014	2014	2014			
		Percent of adult population without health insurance (age 18-64)	n/a	Social and Economic Factors	Percentage	312,450	n/a	17.3%	16.3%	14.3%	Below benchmark	State	-3.00%	American Community Survey	2014	2014	2014			
		Percent of insured population receiving MediCal/Medicaid	n/a	Social and Economic Factors	Percentage	no data	n/a	14.0%	no data	18.2%	Below benchmark	State	4.20%	American Community Survey	2014		2014			
		Mental Health Care Provider Rate (Per 100,000 Population)	Access to Mental Health Providers	Clinical Care	Rate	502,544	n/a	157	134.1	159.2	Above benchmark	State	2.19	University of Wisconsin Population Health Institute,County Health Rankings.	2014	2014	2014			
	Related	Percent Uninsured Population	Insurance - Uninsured Population	Social & Economic Factors	Percentage	482,720	n/a	17.8%	14.9%	14.1%	Below benchmark	State	-3.69%	American Community Survey	2009-13	2009-13	2009-13			
		Federally Qualified Health Centers per 100,000 population	Federally Qualified Health Centers	Clinical Care	Rate	483,878	n/a	2.0	1.9	3.3	Above benchmark	State	1.34	US Department of Health & Human Services,Center for Medicare & Medicaid Services,Provider of Services File.	2014	2014	2014			
		Preventable hospitalization rate among Medicare enrollees / preventable hospital events per 1,000 population	n/a	Clinical Care	Rate	no data	n/a	45.3	59.3	30.9	Below benchmark	State	-14.40	Dartmouth Atlas of Health Care	2012	2012	2012			
		Percent of kindergarteners with all required immunizations	n/a	Clinical Care	Percentage	no data	n/a	90.4%	no data	90.0%	Above benchmark	State	-0.40%	CDPH Immunization Branch (data accessed through kidsdata.org)	2014-15		2014-15			
		Percentage of adults age 65+ who have ever received a pneumonia vaccination	n/a	Clinical Care	Percentage	no data	n/a	63.4%	67.5%	65.2%	Above benchmark	State	1.80%	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System	2006-12	2006-12	2006-12			
		Percentage of Population Living in a HPSA	Health Professional Shortage Area - Primary Care	Clinical Care	Percentage	483,878	n/a	25.2%	34.1%	11.2%	Below benchmark	State	-13.97%	US Department of Health & Human Services,Health Resources and Services Administration,Health Resources and Services Administration,California Office of Statewide Health Planning and Development,OSHDP Patient Discharge Data. Additional data analysis by CARES.	2015	2015	2015			
		Preventable Hospital Events, Age-Adjusted Discharge Rate (Per 10,000 Pop.	Preventable Hospital Events	Clinical Care	Rate	no data	n/a	83.2	no data	56.7	Below benchmark	State	-26.47	Dartmouth College Institute for Health Policy & Clinical Practice,Dartmouth Atlas of Health Care.	2011		2011			
		Percent Female Medicare Enrollees with Mammogram in Past 2 Year	Cancer Screening - Mammogram	Clinical Care	Percentage	3,240	n/a	59.3%	63.0%	64.5%	Above benchmark	State	5.20%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse.	2012		2012			
		Percent Adults Females Age 18+ with Regular Pap Test(Age-Adjusted)	Cancer Screening - Pap Test	Clinical Care	Percentage	311,920	n/a	78.3%	78.5%	80.3%	Above benchmark	State	2.00%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse.	2006-12	2006-12	2006-12			
		Percent Adults Screened for Colon Cancer (Age-Adjusted)	Cancer Screening - Sigmoid/Colonoscopy	Clinical Care	Percentage	131,955	n/a	57.9%	61.3%	55.5%	Above benchmark	State	-2.40%	US Sonoma County's Road to the Early Achievement and Development of Youth, Ready to Learn: Findings from the Kindergarten Student	2006-12	2006-12	2006-12			
		Access to Education	Core	Kindergarten readiness	n/a	Social and Economic Factors	Percentage	no data	n/a	no data	no data	36.0%	Above benchmark	n/a					2015-16	
				Percent of graduating students meeting UC or CSU course requirements	n/a	Social and Economic Factors	Percentage	no data	n/a	41.9%	n/a	32.5%	Above benchmark	State	-9.38%	California Department of Education	2013-14		2013-14	
Percent of English language learners (K-12) who met California English Language Development Test (CELDT) criteria for proficiency	n/a			Social and Economic Factors	Percentage	no data	n/a	39.0%	n/a	42.0%	Above benchmark	State	3.00%	California Department of Education	2014-15		2014-15			
Percent of English language learners (grade 10) who passed the California High School Exit Exam in English Language Arts (ELA)	n/a			Social and Economic Factors	Percentage	no data	n/a	38.0%	n/a	39.0%	Above benchmark	State	1.00%	California Department of Education	2013-14		2013-14			
Percent of English language learners (grade 10) who passed the California High School Exit Exam in Math	n/a			Social and Economic Factors	Percentage	no data	n/a	54.0%	n/a	55.0%	Above benchmark	State	1.00%	California Department of Education	2013-14		2013-14			
Percent of children age 3-4 enrolled in school (includes Head Start, licensed child care, nurseries, Pre-K, registered child care, and other)	Education - School Enrollment Age 3-4			Social and Economic Factors	Percentage	no data	n/a	47.8%	47.1%	58.1%	Above benchmark	State	10.30%	American Community Survey	2014	2014	2014			
Percent of population age 25+ with Associate's degree or higher	n/a			Social and Economic Factors	Percentage	no data	n/a	38.8%	no data	41.5%	Above benchmark	State	2.70%	American Community Survey, 5y	2010-14		2010-14			

Health Indicators					Data Estimates					Needs Score			Data Source and Year					
Potential Health Needs	Core/ Related	Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable
		Percent Population Age 25+ with No High School Diploma	Education - Less than High School Diploma (or Equivalent)	Social & Economic Factors	Percentage	no data	n/a	18.8%	14.0%	13.3%	Below benchmark	State	-5.48%	American Community Survey	2009-13	2009-13	2009-13	
		Cohort Graduation Rate	Education - High School Graduation Rate	Social & Economic Factors	Rate	no data	>= 82.4	80.8	no data	81.6	Above benchmark	State	0.80	California Dept. of Education, California Longitudinal Pupil Achievement Data System (CALPADS)	2015		2015	
		Suspension Rate	School Suspensions (per 100 enrolled students)	Social & Economic Factors	Rate	141,365	n/a	4.0	no data	4.4	Below benchmark	State	0.37	California Department of Education	2013		2013	
		Expulsion Rate	School Expulsions (per 100 enrolled students)	Social & Economic Factors	Rate	141,365	n/a	0.1	no data	0.0	Below benchmark	State	-0.01	California Department of Education	2013		2013	
		3rd grade reading proficiency (Percentage of all public school students tested in 3rd grade who scored proficient or advanced on the English Language Arts California Standards Test)	n/a	Social and Economic Factors	Percentage	no data	n/a	45.0%	no data	43.0%	Above benchmark	State	-2.00%	California Dept. of Education, Standardized Testing and Reporting (STAR) Results	2013		2013	
Access to Housing	Core	Proportion of renter occupied households living in overcrowded environments (>1 persons/room)	n/a	Physical Environment	Percentage	no data	n/a	13.2%	no data	9.3%	Below benchmark	State	-3.90%	American Community Survey, 5y	2010-14		2010-14	
		Percentage of owner-occupied housing units where cost exceeds 30% of household income	Housing - Cost Burdened Households	Social and Economic Factors	Percentage	111,634	n/a	39.3%	28.5%	39.4%	Below benchmark	State	0.10%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percentage of renter-occupied housing units where rent/utilities cost 30% or more of household income	n/a	Social and Economic Factors	Percentage	79,429	n/a	53.8%	48.3%	52.4%	Below benchmark	State	-1.40%	American Community Survey	2014	2014	2014	
		Median year housing units built	n/a	Physical Environment	Number	n/a	n/a	1974	1976	1977	n/a	n/a	n/a	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Occupied Housing Units with One or More Substandard Conditions	Housing- Substandard Housing	Physical Environment	Percentage	185,660	n/a	48.4%	36.1%	45.8%	Below benchmark	State	-2.62%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Vacant Housing Units, Percent	Housing- Vacant Housing	Physical Environment	Percentage	205,759	n/a	8.5%	12.5%	9.2%	Below benchmark	State	0.70%	American Community Survey, 5y	2010-14	2010-14	2010-14	
		Percentage of Households where Housing Costs Exceed 30% of Income	Housing- Cost-Burdened Households	Physical Environment	Percentage	185,660	n/a	45.9%	35.5%	45.0%	Below benchmark	State	-0.86%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		HUD-Assisted Units, Rate per 10,000 Housing Units	Housing- Assisted Housings	Physical Environment	Rate	no data	n/a	368.3	no data	338.0	Above benchmark	State	-30.32	US Department of Housing and Urban Development	2014		2014	
Asthma and COPD	Core	Percent Adults with Asthma	Asthma - Prevalence	Health Outcomes	Percentage	398,113	n/a	14.2%	13.4%	19.8%	Below benchmark	State	5.61%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Additional data analysis by CARES.	2011-12	2011-12	2011-12	
		Percent of children age 2-18 ever diagnosed with asthma	n/a	Health Outcomes	Percentage	99,000	n/a	15.7%		13.6%	Below benchmark	State	-2.10%	California Health Interview Survey	2014		2014	X
		Asthma-related Age-Adjusted Discharge Rate (Per 10,000 Pop.)	Asthma - Hospitalizations	Health Outcomes	Rate	no data	n/a	8.9	no data	6.6	Below benchmark	State	-2.33	California Office of Statewide Health Planning and Development,OSHPD Patient Discharge Data. Additional data analysis by CARES.	2011		2011	
	Related	Percentage of Days Exceeding Ozone Standards, Pop. Adjusted Average	Air Quality - Ozone (O3)	Physical Environment	Percentage	483,878	n/a	2.5%	0.5%	0.0%	Below benchmark	State	-2.47%	Centers for Disease Control and Prevention,National Environmental Public Health Tracking Network.	2008	2008	2008	
		Percent Adults Smoking Cigarettes	Tobacco Usage	Health Behaviors	Percentage	372,268	n/a	11.6%	no data	8.8%	Below benchmark	State	-2.80%	California Health Interview Survey	2014	2014	2014	
		Cigarette Expenditures, Percentage of Total Household Expenditures	Tobacco Expenditures	Health Behaviors	Percentage	no data	n/a	1.0%	1.6%	suppressed	Below benchmark	n/a		Nielsen, Nielsen SiteReports	2014	2014	2014	
		Percentage of Days Exceeding PM 2.5 Standards, Pop. Adjusted Average	Air Quality - Particulate Matter 2.5	Physical Environment	Percentage	483,878	n/a	4.2%	1.2%	5.6%	Below benchmark	State	1.46%	Centers for Disease Control and Prevention,National Environmental Public Health Tracking Network.	2008	2008	2008	
		Percent Adults with BMI > 30.0 (Obese)	Obesity (Adult)	Health Outcomes	Percentage	382,000	n/a	27.0%	no data	25.4%	Below benchmark	State	-1.60%	California Health Interview Survey	2014		2014	
		Percent Adults Overweight	Overweight (Adult)	Health Outcomes	Percentage	383,785	n/a	35.9%	35.8%	39.4%	Below benchmark	State	3.56%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Additional data analysis by CARES.	2011-12	2011-12	2011-12	
		Percent Obese Among Children (grades 5, 7, 9)	Obesity (Youth)	Health Outcomes	Percentage	14,736	n/a	19.0%	no data	17.5%	Below benchmark	State	-1.46%	California Department of Education,FITNESSGRAM® Physical Fitness Testing.	2013-14		2013-14	

Health Indicators					Data Estimates					Needs Score			Data Source and Year					
Potential Health Needs	Core/ Related	Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable
		Chronic lower respiratory disease mortality rate (age adjusted; per 100,000)	n/a	Health Outcomes	Rate	no data	n/a	35.9	no data	38.2	Below benchmark	State	2.30	California Department of Public Health	2011-13		2011-13	
		Percent Occupied Housing Units with One or More Substandard Conditions	Housing - Substandard Housing	Physical Environment	Percentage	185,660	n/a	48.4%	36.1%	45.8%	Below benchmark	State	-2.62%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Preventable Hospital Events, Age-Adjusted Discharge Rate (Per 10,000 Pop.)	Preventable Hospital Events	Clinical Care	Rate	no data	n/a	83.2	no data	56.7	Below benchmark	State	-26.47	California Office of Statewide Health Planning and Development, OSHPD Patient Discharge Data. Additional data analysis by CARES.	2011		2011	
		Percent Youth Overweight	Overweight (Youth)	Health Outcomes	Percentage	14,736	n/a	19.3%	no data	20.0%	Below benchmark	State	0.68%	California Department of Education, FITNESSGRAM® Physical Fitness Testing.	2013-14		2013-14	
Cancers	Core	Annual Breast Cancer Incidence Rate (Per 100,000 Pop.)	Cancer Incidence - Breast	Health Outcomes	Rate	243,235	n/a	122.4	122.7	138.1	Below benchmark	State	15.70	National Institutes of Health, National Cancer Institute, Surveillance, Epidemiology, and End Results Program. State Cancer Profiles University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, COPH - Death Public Use Data. National Institutes of Health, National Cancer Institute, Surveillance, Epidemiology, and End Results Program. State Cancer Profiles National Institutes of Health, National Cancer Institute, Surveillance, Epidemiology, and End Results Program. State Cancer Profiles	2007-11	2007-11	2007-11	
		Cancer, Age-Adjusted Mortality Rate (per 100,000 Population)	Mortality - Cancer	Health Outcomes	Rate	483,878	<= 160.6	157.1	no data	165.8	Below benchmark	State	8.71		2010-12		2010-12	
		Annual Cervical Cancer Incidence Rate (Per 100,000 Pop.)	Cancer Incidence - Cervical	Health Outcomes	Rate	243,235	<= 7.1	7.8	7.8	6.0	Below benchmark	State	-1.80		2007-11	2007-11	2007-11	
		Annual Colon and Rectum Cancer Incidence Rate (Per 100,000 Pop.)	Cancer Incidence - Colon and Rectum	Health Outcomes	Rate	478,551	<= 38.7	41.5	43.3	42.8	Below benchmark	State	1.30		2007-11	2007-11	2007-11	
		Annual Prostate Cancer Incidence Rate (Per 100,000 Pop.)	Cancer Incidence - Prostate	Health Outcomes	Rate	235,316	n/a	136.4	142.3	143.3	Below benchmark	State	6.90		2007-11	2007-11	2007-11	
		All cancers mortality rate per 100,000 population (age-adjusted)	n/a	Health Outcomes			<=161.4	151.0	NA	159.1	Below benchmark	State	8.10	California Department of Public Health	2011-13		2011-13	
		Breast cancer mortality rate (age-adjusted)	n/a	Health Outcomes	Rate	no data	<=20.7	20.7	NA	23.4	Below benchmark	State	2.70	California Department of Public Health	2011-13		2011-13	
		Colorectal cancer mortality rate (age-adjusted)	n/a	Health Outcomes	Rate	no data	<=14.5	13.9	NA	14.5	Below benchmark	State	0.60	California Department of Public Health	2011-13		2011-13	
		Lung cancer mortality rate (age-adjusted)	n/a	Health Outcomes	Rate	no data	<=45.5	33.6	NA	30.5	Below benchmark	State	-3.10	California Department of Public Health	2011-13		2011-13	
		Prostate cancer mortality rate (age-adjusted)	n/a	Health Outcomes	Rate	no data	<=21.8	20.2	NA	18.5	Below benchmark	State	-1.70	California Department of Public Health	2011-13		2011-13	
		Annual Lung Cancer Incidence Rate (Per 100,000 Pop.)	Cancer Incidence - Lung	Health Outcomes	Rate	478,551	n/a	49.5	64.9	53.4	Below benchmark	State	3.90	National Institutes of Health, National Cancer Institute, Surveillance, Epidemiology, and End Results Program. State Cancer Profiles Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2007-11	2007-11	2007-11	
		Estimated Adults Drinking Excessively(Age-Adjusted Percentage)	Alcohol - Excessive Consumption	Health Behaviors	Percentage	372,268	n/a	17.2%	16.9%	21.3%	Below benchmark	State	4.10%		2006-12	2006-12	2006-12	
		Alcoholic Beverage Expenditures, Percentage of Total Food-At-Home Expenditures	Alcohol - Expenditures	Health Behaviors	Percentage	no data	n/a	12.9%	14.3%	suppressed	Below benchmark	State		Nielsen, Nielsen Site Reports	2014	2014	2014	
		Percent of adults age 50+ who have ever had a sigmoidoscopy/colonoscopy / colon cancer screening (age-adjusted)	n/a	Clinical Care	Percentage	no data	n/a	57.9%	61.3%	55.5%	Above benchmark	State	-2.40%	Behavioral Risk Factor Surveillance System (BRFSS)	2006-12	2006-12	2006-12	
		Percent of women age 55+ with mammogram in past 2 years	n/a	Clinical Care	Percentage	84,000	>=81.1%	83.9%	n/a	80.5%	Above benchmark	State	-3.40%	California Health Interview Survey	2012		2012	
		Liquor Stores, Rate (Per 100,000 Population)	Liquor Store Access	Physical Environment	Rate	483,878	n/a	10.0	10.4	13.4	Below benchmark	State	3.41	US Census Bureau, County Business Patterns. Additional data analysis by CARES.	2012	2012	2012	
		Percent Adults Overweight	Overweight (Adult)	Health Outcomes	Percentage	383,785	n/a	35.9%	35.8%	39.4%	Below benchmark	State	3.56%	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES.	2011-12	2011-12	2011-12	
		Percent Adults with BMI > 30.0 (Obese)	Obesity (Adult)	Health Outcomes	Percentage	382,000	n/a	27.0%	no data	25.4%	Below benchmark	State	-1.60%	California Health Interview Survey	2014		2014	
		Percent Female Medicare Enrollees with Mammogram in Past 2 Year	Cancer Screening - Mammogram	Clinical Care	Percentage	3,240	n/a	59.3%	63.0%	64.5%	Above benchmark	State	5.20%	Dartmouth College Institute for Health Policy & Clinical Practice, Dartmouth Atlas of Health Care.	2012		2012	

Health Indicators					Data Estimates					Needs Score			Data Source and Year					
Potential Health Needs	Core/ Related	Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable
	Related	Percent Adults with Inadequate Fruit / Vegetable Consumption	Low Fruit/Vegetable Consumption (Adult)	Health Behaviors	Percentage	359,017	n/a	71.5%	75.7%	69.9%	Below benchmark	State	-1.60%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2005-09	2005-09	2005-09	
		Fruit / Vegetable Expenditures, Percentage of Total Food-At-Home Expenditures	Fruit/Vegetable Expenditures	Health Behaviors	Percentage	no data	n/a	14.1%	12.7%	suppressed	Above benchmark	State		Nielsen, Nielsen SiteReports	2014	2014	2014	
		Percent Population with Low Food Access	Food Security - Food Desert Population	Social & Economic Factors	Percentage	483,878	n/a	14.3%	23.6%	17.0%	Below benchmark	State	2.72%	US Department of Agriculture,Economic Research Service,USDA - Food Access Research Atlas.	2010	2010	2010	
		Percent Population Smoking Cigarettes(Age-Adjusted)	Tobacco Usage	Health Behaviors	Percentage	372,268	n/a	12.8%	18.1%	15.1%	Below benchmark	State	2.30%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2006-12	2006-12	2006-12	
		Cigarette Expenditures, Percentage of Total Household Expenditures	Tobacco Expenditures	Health Behaviors	Percentage	no data	n/a	1.0%	1.6%	suppressed	Below benchmark	State		Nielsen, Nielsen SiteReports	2014	2014	2014	
		Percent Adults Females Age 18+ with Regular Pap Test(Age-Adjusted)	Cancer Screening - Pap Test	Clinical Care	Percentage	311,920	n/a	78.3%	78.5%	80.3%	Above benchmark	State	2.00%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2006-12	2006-12	2006-12	
		Percent Population with no Leisure Time Physical Activity	Physical Inactivity (Adult)	Health Behaviors	Percentage	373,106	n/a	16.6%	22.6%	12.8%	Below benchmark	State	-3.79%	Centers for Disease Control and Prevention,National Center for Chronic Disease Prevention and Health Promotion.	2012	2012	2012	
		Percent Adults Screened for Colon Cancer (Age-Adjusted)	Cancer Screening - Sigmoid/Colonoscopy	Clinical Care	Percentage	131,955	n/a	57.9%	61.3%	55.5%	Above benchmark	State	-2.40%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2006-12	2006-12	2006-12	
		Rank of pesticides use among California counties	n/a	Physical Environment	Number	n/a	n/a	n/a	n/a	21	n/a		n/a	California Department of Pesticide Regulation			2013	
		Pounds of pesticides applied	n/a	Physical Environment	Number	n/a	n/a	193,597,806	n/a	2,172,032	n/a		n/a	California Department of Pesticide Regulation	2013		2013	
		Percentage of Days Exceeding PM 2.5 Standards, Pop. Adjusted Average	Air Quality - Particulate Matter 2.5	Physical Environment	Percentage	483,878	n/a	4.2%	1.2%	5.6%	Below benchmark	State	1.46%	Centers for Disease Control and Prevention,National Environmental Public Health Tracking Network.	2008	2008	2008	
Climate and Health	Core	Percentage of Days Exceeding PM 2.5 Standards, Pop. Adjusted Average	Air Quality - Particulate Matter 2.5	Physical Environment	Percentage	483,878	n/a	4.2%	1.2%	5.6%	Below benchmark	State	1.46%	Centers for Disease Control and Prevention,National Environmental Public Health Tracking Network.	2013	2013	2013	
		Percentage of Population Potentially Exposed to Unsafe Drinking Water	Drinking Water Safety	Physical Environment	Percentage	265,167	n/a	2.7%	10.3%	0.4%	Below benchmark	State	-2.28%	University of Wisconsin Population Health Institute,County Health Rankings.	2012-13	2012-13	2012-13	
		Percentage of Days Exceeding Ozone Standards, Pop. Adjusted Average	Air Quality - Ozone (O3)	Physical Environment	Percentage	483,878	n/a	2.5%	0.5%	0.0%	Below benchmark	State	-2.47%	Centers for Disease Control and Prevention,National Environmental Public Health Tracking Network.	2008	2008	2008	
		Percentage of Weather Observations with High Heat Index Values	Climate & Health - Heat Index Days	Physical Environment	Percentage	10,220	n/a	0.6%	4.7%	0.0%	Below benchmark	State	-0.63%	National Oceanic and Atmospheric Administration,North America Land Data Assimilation System (NLDAS) . Accessed via CDC WONDER. Additional data analysis by	2014	2014	2014	
		Percentage of Weeks in Drought (Any)	Climate & Health - Drought Severity	Physical Environment	Percentage	no data	n/a	92.8%	45.9%	92.7%	Below benchmark	State	-0.15%	US Drought Monitor	2012-14	2012-14	2012-14	
		Heat-related Emergency Department Visits, Rate per 100,000 Population	Climate & Health - Heat Stress Events	Physical Environment	Rate	461	n/a	11.1	no data	11.7	Below benchmark	State	0.57	California Department of Public Health,CDPH - Tracking.	2005-12		2005-12	
		Asthma-related Age-Adjusted Discharge Rate (Per 10,000 Pop.)	Asthma - Hospitalizations	Health Outcomes	Rate	no data	n/a	8.9	no data	6.6	Below benchmark	State	-2.33	California Office of Statewide Health Planning and Development,OSHPD Patient Discharge Data. Additional data analysis by CARES.	2011		2011	
		Percent Adults with Asthma	Asthma - Prevalence	Health Outcomes	Percentage	398,113	n/a	14.2%	13.4%	19.8%	Below benchmark	State	5.61%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Additional data analysis by CARES.	2011-12	2011-12	2011-12	
		Percent Low Birth Weight Births	Low Birth Weight	Health Outcomes	Percentage	483,878	n/a	6.8%	no data	5.8%	Below benchmark	State	-1.0%	California Department of Public Health,CDPH - Birth Profiles by ZIP Code.	2011		2011	
		Rank of pesticides use among California counties	n/a	Physical Environment	Number	n/a	n/a	n/a	n/a	21	Below benchmark	n/a		California Department of Pesticide Regulation			2013	
		Total Road Network Density (Road Miles per Acre)	Rank of pesticides use among California counties	Physical Environment	Rate	2,003	n/a	4.3	2.0	1.9	Below benchmark	State	-2.36	Environmental Protection Agency,EPA Smart Location Database.	2011	2011	2011	
		Percentage of Population within Half Mile of Public Transit	Transit - Public Transit within 0.5 Miles	Physical Environment	Percentage	483,878	n/a	15.5%	8.1%	12.1%	Above benchmark	State	-3.47%	Environmental Protection Agency,EPA Smart Location Database.	2011	2011	2011	

Health Indicators					Data Estimates					Needs Score			Data Source and Year					
Potential Health Needs	Core/ Related	Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable
	Related	Population Weighted Percentage of Report Area Covered by Tree Canopy	Climate & Health - Canopy Cover	Physical Environment	Percentage	483,878	n/a	15.1%	24.7%	16.1%	Above benchmark	State	0.99%	Multi-Resolution Land Characteristics Consortium,National Land Cover Database. Additional data analysis by CARES. California Office of Statewide Health Planning and Development,OSHPD Patient Discharge Data. Additional data analysis by CARES. Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. University of Missouri,Center for Applied Research and Environmental Systems. California Department of Public Health,CDPH - Death Public Use Data.	2011	2011	2011	
		Diabetes-relaed Age-Adjusted Discharge Rate (Per 10,000 Pop.)	Diabetes Hospitalizations	Health Outcomes	Rate	no data	n/a	10.4	no data	6.9	Below benchmark	State	-3.48		2011		2011	
		Average Number of Mentally Unhealthy Days per Month	Mental Health - Poor Mental Health Days	Health Outcomes	Rate	372,268	n/a	3.6	3.5	3.4	Below benchmark	State	-0.20		2006-12	2006-12	2006-12	
		Heart Disease, Age-Adjusted Mortality Rate (per 100,000 Population)	Mortality - Ischaemic Heart Disease	Health Outcomes	Rate	483,878	<= 100.8	163.2	no data	146.2	Below benchmark	State	-16.98		2010-12		2010-12	
		Percentage of Workers Commuting by Car, Alone	Commute to Work - Alone in Car	Health Behaviors	Percentage	225,640	n/a	73.2%	76.4%	76.0%	Below benchmark	State	2.85%		2009-13	2009-13	2009-13	
		Percent Adults with BMI > 30.0 (Obese)	Obesity (Adult)	Health Outcomes	Percentage	382,000	n/a	27.0%	no data	25.4%	Below benchmark	State	-1.60%		2014		2014	
		Percent Obese Among Children (grades 5, 7, 9)	Obesity (Youth)	Health Outcomes	Percentage	14,736	n/a	19.0%	no data	17.5%	Below benchmark	State	-1.46%		2013-14		2013-14	
CVD/Stroke	Core	Percent Adults with Heart Disease	Heart Disease Prevalence	Health Outcomes	Percentage	374,000	n/a	6.3%	no data	7.6%	Below benchmark	State	1.30%	California Health Interview Survey	2011-12		2011-12	
		Heart Disease, Age-Adjusted Mortality Rate (per 100,000 Population)	Mortality - Ischaemic Heart Disease	Health Outcomes	Rate	483,878	<= 100.8	163.2	no data	146.2	Below benchmark	State	-16.98	University of Missouri,Center for Applied Research and Environmental Systems. California Department of Public Health,CDPH - Death Public Use Data.	2010-12		2010-12	
		Percent of Medicare fee-for-service population with ischaemic heart disease	n/a	Health Outcomes	Percentage	no data	n/a	26.1%	28.6%	23.7%	Below benchmark	State	-2.40%	Centers for Medicare and Medicaid Services	2012	2012	2012	
		Coronary heart disease mortality rate (age-adjusted; per 100,000)	n/a	Health Outcomes	Rate	no data	<= 103.4	103.8	no data	88.7	Below benchmark	State	-15.10	California Department of Public Health	2011-13			
		Ischaemic heart disease mortality rate (age-adjusted, per 100,000)	n/a	Health Outcomes	Rate	no data	<= 103.4	102.9	105.7	86.5	Below benchmark	State	-16.40	National Vital Statistics	2011-13	2011-13	2011-13	
		Stroke mortality rate (age-adjusted)	n/a	Health Outcomes	Rate	no data	<=34.8	35.9	no data	36.2	Below benchmark	State	0.30	California Department of Public Health	2011-13		2011-13	
		Stroke, Age-Adjusted Mortality Rate (per 100,000 Population)	Mortality - Stroke	Health Outcomes	Rate	483,878	n/a	37.4	no data	37.9	Below benchmark	State	0.53	University of Missouri,Center for Applied Research and Environmental Systems. California Department of Public Health,CDPH - Death Public Use Data.	2010-12		2010-12	
		Percent Population with no Leisure Time Physical Activity	Physical Inactivity (Adult)	Health Behaviors	Percentage	373,106	n/a	16.6%	22.6%	12.8%	Below benchmark	State	-3.79%	Centers for Disease Control and Prevention,National Center for Chronic Disease Prevention and Health Promotion.	2012	2012	2012	
		Percent Physically Inactive	Physical Inactivity (Youth)	Health Behaviors	Percentage	14,736	n/a	35.9%	no data	32.0%	Below benchmark	State	-3.88%	California Department of Education,FITNESSGRAM® Physical Fitness Testing.	2013-14		2013-14	
		Percent of adults (age 18+) who have ever been diagnosed with high blood pressure	n/a	Health Outcomes	Percentage	no data	n/a	26.2%	28.2%	26.7%	Below benchmark	State	0.50%	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System	2006-12	2006-12	2006-12	
		Percent of Medicare fee-for-service population diagnosed with high blood pressure	n/a	Physical Environment	Percentage	no data	n/a	51.5%	55.5%	44.1%	Below benchmark	State	-7.40%	Centers for Medicare and Medicaid Services	2012	2012	2012	
		Percent of Medicare fee-for-service population diagnosed with high cholesterol	n/a	Health Outcomes	Percentage	no data	n/a	42.1%	44.8%	37.2%	Below benchmark	State	-4.87%	Centers for Medicare and Medicaid Services	2012	2012	2012	
		Percent Population Within 1/2 Mile of a Park	Park Access	Physical Environment	Percentage	483,878	n/a	58.6%	no data	58.1%	Above benchmark	State	-0.53%	US Census Bureau,Decennial Census. ESRI Map Gallery.	2010		2010	
		Recreation and Fitness Facilities, Rate (Per 100,000 Population)	Recreation and Fitness Facility Access	Physical Environment	Rate	483,878	n/a	8.7	9.4	12.6	Above benchmark	State	3.96	US Census Bureau,County Business Patterns. Additional data analysis by CARES.	2012	2012	2012	
		Percent Population Smoking Cigarettes(Age-Adjusted)	Tobacco Usage	Health Behaviors	Percentage	372,268	n/a	12.8%	18.1%	15.1%	Below benchmark	State	2.30%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2006-12	2006-12	2006-12	
		Cigarette Expenditures, Percentage of Total Household Expenditures	Tobacco Expenditures	Health Behaviors	Percentage	no data	n/a	1.0%	1.6%	suppressed	Below benchmark	State		Nielsen, Nielsen SiteReports	2014	2014	2014	

Health Indicators					Data Estimates					Needs Score			Data Source and Year					
Potential Health Needs	Core/ Related	Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable
	Related	Estimated Adults Drinking Excessively(Age-Adjusted Percentage)	Alcohol - Excessive Consumption	Health Behaviors	Percentage	372,268	n/a	17.2%	16.9%	21.3%	Below benchmark	State	4.10%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2006-12	2006-12	2006-12	
		Alcoholic Beverage Expenditures, Percentage of Total Food-At-Home Expenditures	Alcohol - Expenditures	Health Behaviors	Percentage	no data	n/a	12.9%	14.3%	suppressed	Below benchmark	State		Nielsen, Nielsen SiteReports	2014	2014	2014	
		Liquor Stores, Rate (Per 100,000 Population)	Liquor Store Access	Physical Environment	Rate	483,878	n/a	10.02	10.35	13.43	Below benchmark	State	3.41	US Census Bureau,County Business Patterns. Additional data analysis by CARES.	2012	2012	2012	
		Percent Adults Overweight	Overweight (Adult)	Health Outcomes	Percentage	383,785	n/a	35.9%	35.8%	39.4%	Below benchmark	State	3.56%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Additional data analysis by CARES.	2011-12	2011-12	2011-12	
		Percent Adults with BMI > 30.0 (Obese)	Obesity (Adult)	Health Outcomes	Percentage	382,000	n/a	27.0%	no data	25.4%	Below benchmark	State	-1.60%	California Health Interview Survey	2014		2014	
		Percent Overweight Among Children (grades 5, 7, 9)	Overweight (Youth)	Health Outcomes	Percentage	14,736	n/a	19.3%	no data	20.0%	Below benchmark	State	0.68%	California Department of Education,FITNESSGRAM® Physical Fitness Testing.	2013-14		2013-14	
		Obesity Among Children (grades 5, 7, 9)	Obesity (Youth)	Health Outcomes	Percentage	14,736	n/a	19.0%	no data	17.5%	Below benchmark	State	-1.46%	California Department of Education,FITNESSGRAM® Physical Fitness Testing.	2013-14		2013-14	
		Percent Adults with Diagnosed Diabetes(Age-Adjusted)	Diabetes Prevalence	Health Outcomes	Percentage	371,014	n/a	8.1%	9.1%	6.0%	Below benchmark	State	-2.05%	Centers for Disease Control and Prevention,National Center for Chronic Disease Prevention and Health Promotion. California Office of Statewide Health Planning and Development,OSHPD Patient Discharge Data. Additional data analysis by CARES.	2012	2012	2012	
		Diabetes-related Age-Adjusted Discharge Rate (Per 10,000 Pop.)	Diabetes Hospitalizations	Health Outcomes	Rate	no data	n/a	10.4	no data	6.9	Below benchmark	State	-3.48	Dartmouth College Institute for Health Policy & Clinical Practice,Dartmouth Atlas of Health Care.	2011		2011	
		Percent Medicare Enrollees with Diabetes with Annual Exam	Diabetes Management (Hemoglobin A1c Test)	Clinical Care	Percentage	37,379	n/a	81.5%	84.6%	82.0%	Above benchmark	State	0.52%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Additional data analysis by CARES.	2012	2012	2012	
		Percent Adults with High Blood Pressure Not Taking Medication	High Blood Pressure - Unmanaged	Clinical Care	Percentage	367,525	n/a	30.3%	21.7%	30.6%	Below benchmark	State	0.27%		2006-10	2006-10	2006-10	
		Total population	n/a	Demographics				37,659,181	n/a	487,469	n/a			American Community Survey, 5y	2009-13		2009-13	
		Families with Children (% of total households)	n/a	Demographics			n/a	36.5%	32.7%	27.7%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Male Population	n/a	Demographics		487,469	n/a	49.7%	49.2%	49.2%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Female Population	n/a	Demographics		487,469	n/a	50.3%	50.8%	50.8%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Population under Age 18	n/a	Demographics		487,469	n/a	24.5%	23.7%	25.3%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Population Age 0-4	n/a	Demographics		487,469	n/a	6.7%	6.4%	5.6%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Population Age 5-17	n/a	Demographics		487,469	n/a	17.8%	17.3%	15.9%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Population Age 18-24	n/a	Demographics		487,469	n/a	10.5%	10.0%	9.4%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Population Age 25-34	n/a	Demographics		487,469	n/a	14.4%	13.4%	12.7%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Population Age 35-44	n/a	Demographics		no data	n/a	13.7%	13.1%	12.0%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Population Age 45-54	n/a	Demographics		487,469	n/a	13.9%	14.3%	14.8%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Population Age 55-64	n/a	Demographics		487,469	n/a	11.1%	12.1%	14.4%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	

Health Indicators					Data Estimates					Needs Score			Data Source and Year					
Potential Health Needs	Core/ Related	Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable
Demographics		Percent Population Age 65+	n/a	Demographics		487,469	n/a	6.4%	13.4%	8.1%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent of Population 75y+	n/a	Demographics		487,469	n/a	3.7%	6.0%	4.3%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Median Age in Years	n/a	Demographics		487,469	n/a	35.4	37.3	40.2	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Veteran Population (% of total population)	n/a	Demographics		381,534	n/a	6.7%	9.0%	8.7%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Population Hispanic	n/a	Demographics		487,469	n/a	37.9%	16.6%	25.2%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Population Foreign-Born	n/a	Demographics		487,469	n/a	27.0%	13.0%	16.6%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Population not a U.S. Citizen	n/a	Demographics		487,469	n/a	52.9%	7.1%	59.4%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Population Geographic Mobility	n/a	Demographics		no data	n/a	4.9%	6.0%	14.7%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent of the population that speak English less than "very well"	n/a	Demographics		no data	n/a	19.4%	8.6%	13.3%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
		Living Wage - Annual income required to support household with two adults*	n/a	Social and Economic Factors		no data	NA	\$39,988	n/a	\$38,886	n/a			calculated from livingwage.mit.edu	2015		2015	
		Living wage - Annual income required to support one adult and one child*	n/a	Social and Economic Factors		no data	NA	\$ 52,544	n/a	\$51,492	n/a			calculated from livingwage.mit.edu	2015		2015	
		Median household income	n/a	Social and Economic Factors		no data	NA	\$61,933	no data	\$67,771	Above benchmark			American Community Survey, 5y	2014		2014	
		Percent Population Age 5+ with Limited English Proficiency	n/a	Demographics		no data	n/a	19.40%	8.60%	10.80%	n/a			American Community Survey, 5y	2009-13	2009-13	2009-13	
Early Child Development	Core	Percent of children in foster care system for more than 8 days but less than 12 months with 2 or less placements (placement stability)	n/a	Social and Economic Factors	Percentage	no data	n/a	86.6%	no data	85.3%	Above benchmark	State	-1.30%	California Child Welfare Indicators Project (CCWIP)	2014		2014	
		Percent of children age 0-12 considered in excellent or very good health	n/a	Health Outcomes	Percentage	59,000	n/a	78.7%	no data	76.2%	Above benchmark	State	-2.48%	California Health Interview Survey	2014		2014	
		Percent of children under age 18 living below 100% of Federal Poverty Level	n/a	Social and Economic Factors	Percentage	no data	n/a	22.7%	no data	12.8%	Below benchmark	State	-9.90%	American Community Survey, 5y	2010-14		2010-14	
		Percent of children (age <18) living in households with limited or uncertain access to adequate food	n/a	Social and Economic Factors	Percentage	no data	n/a	26.3%	no data	21.5%	Below benchmark	State	-4.80%	Feeding America, Map the Meal Gap, Accessed via Kidsdata.org	2012		2012	
		Percent of children age 3-4 enrolled in school (includes Head Start, licensed child care, nurseries, Pre-K, registered child care, and other)	n/a	Social and Economic Factors	Percentage	no data	n/a	47.8%	47.1%	58.1%	Above benchmark	State	10.30%	American Community Survey	2014	2014	2014	
		3rd grade reading proficiency (Percentage of all public school students tested in 3rd grade who scored proficient or advanced on the English Language Arts California Standards Test)	n/a	Social and Economic Factors	Percentage	no data	n/a	45.0%	no data	43.0%	Above benchmark	State	-2.00%	California Dept. of Education, Standardized Testing and Reporting (STAR) Results	2013		2013	
	Related	Pounds of pesticides applied	n/a	Physical Environment	Number	n/a	n/a	193,597,806	n/a	2,172,032	n/a		n/a	California Department of Pesticide Regulation	2013		2013	
		Rank of pesticides use among California counties	n/a	Physical Environment	Number	n/a	n/a	n/a	n/a	21	n.a	n/a	n/a	California Department of Pesticide Regulation			2013	
		Percent Population in Poverty	Poverty - Population Below 100% FPL	Social & Economic Factors	Percentage	480,328	n/a	15.9%	15.4%	11.9%	Below benchmark	State	-4.06%	American Community Survey, 5y	2014	2014	2014	
		Percent Population with Income at or Below 200% FPL	Poverty - Population Below 200% FPL	Social & Economic Factors	Percentage	485,077	n/a	36.4%	34.5%	29.6%	Below benchmark	State	-6.80%	American Community Survey, 5y	2014	2014	2014	

Health Indicators					Data Estimates					Needs Score			Data Source and Year					
Potential Health Needs	Core/ Related	Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable
Economic Security	Core	Percent Population Under Age 18 in Poverty	Poverty - Children Below 100% FPL	Social & Economic Factors	Percentage	480,328	n/a	22.7%	21.7%	12.8%	Below benchmark	State	-9.90%	American Community Survey, 5y	2014	2014	2014	
		Unemployment Rate	n/a	Social & Economic Factors	Percentage	257,794	n/a	6.8%	5.4%	5.0%	Below benchmark	State	-1.80%	US Department of Labor, Bureau of Labor Statistics	2015	2015	2015	
		Percent of people living below 50% of Federal Poverty Line	n/a	Social and Economic Factors	Percentage	no data	n/a	6.9%	6.8%	4.8%	Below benchmark	State	-2.10%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent People 65 years or Older in Poverty	n/a	Social and Economic Factors	Percentage	no data	n/a	10.6%	9.5%	7.9%	Below benchmark	State	-2.70%	American Community Survey, 5y	2014	2014	2014	
		Percent Single Female Headed Households in Poverty	n/a	Social and Economic Factors	Percentage	no data	n/a	29.9%	33.3%	20.7%	Below benchmark	State	-9.20%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent of Families Earning over \$75,000/year	n/a	Social and Economic Factors	Percentage	160,476	n/a	12.4%	42.8%	13.2%	Below benchmark	State	0.80%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Median household income	n/a	Social and Economic Factors	Number	215,563	n/a	\$61,933		\$67,771	Above benchmark	State	\$5,838	American Community Survey, 5y	2014	2014	2014	
		Per capita income	n/a	Social and Economic Factors	Number	487,469	n/a	\$29,527	\$28,154	\$32,825	Above benchmark	State	\$3,298	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent of households with public assistance income	n/a	Social and Economic Factors	Percentage	no data	n/a	4.0%	2.8%	2.5%	Below benchmark	State	-1.50%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Gini coefficient of income inequality	n/a	Social and Economic Factors	Proportion	no data	n/a	0.48	0.48	0.45	Below benchmark	State	-0.0352	American Community Survey	2010-14	2010-14	2010-14	
	Related	Dignity Health Community Need Index	n/a	Social and Economic Factors	Number	n/a	n/a	n/a	n/a	3.20	Below benchmark	n/a	n/a	Dignity Health Community Health Index			2015	
		Percent of vacant housing units	Housing - Vacant Housing	Social and Economic Factors	Percentage	no data	n/a	8.5%	12.5%	9.2%	Below benchmark	State	0.70%	American Community Survey, 5y	2010-14	2010-14	2010-14	
		Percent of households with no motor vehicle	Economic Security - Households with No V	Social and Economic Factors	Percentage	no data	n/a	7.8%	9.1%	5.2%	Below benchmark	State	-2.60%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent of children eligible for free or reduce price school lunch	Children Eligible for Free/Reduced Price Lu	Social and Economic Factors	Percentage	no data	n/a	58.6%	no data	46.9%	Below benchmark	State	-11.70%	California Department of Education	2014-15		2014-15	
		Percent of children age 3-4 enrolled in school (includes Head Start, licensed child care, nurseries, Pre-K, registered child care, and other)	n/a	Social and Economic Factors	Percentage	no data	n/a	47.8%	47.1%	58.1%	Above benchmark	State	10.30%	American Community Survey	2014	2014	2014	
		3rd grade reading proficiency (Percentage of all public school students tested in 3rd grade who scored proficient or advanced on the English Language Arts California Standards Test)	n/a	Social and Economic Factors	Percentage	no data	n/a	45.0%	no data	43.0%	Above benchmark	State	-2.00%	California Dept. of Education, Standardized Testing and Reporting (STAR) Results	2013		2013	
		Proportion of renter occupied households living in overcrowded environments (>1 persons/room)	n/a	Physical Environment	Percentage	no data	n/a	13.2%	no data	9.3%	Below benchmark	State	-3.90%	American Community Survey, 5y	2010-14		2010-14	
		Cohort Graduation Rate	Education - High School Graduation Rate	Social & Economic Factors	Percentage	no data	>= 82.4	80.8%	no data	81.6%	Above benchmark	State	0.80%	California Dept. of Education, California Longitudinal Pupil Achievement Data System (CALPADS)	2015		2015	
		Percentage of Grade 4 ELA Test Score Not Proficient	Education - Reading Below Proficiency	Social & Economic Factors	Percentage	4,829	<= 36.3%	36.0%	no data	34.0%	Below benchmark	State	-2.00%	California Department of Education	2012-13		2012-13	
		Percent Students Eligible for Free or Reduced Price Lunch	Children Eligible for Free/Reduced Price Lunch	Social & Economic Factors	Percentage	69,711	n/a	58.1%	52.4%	45.1%	Below benchmark	State	-13.05%	National Center for Education Statistics,NCES - Common Core of Data.	2013-14	2013-14	2013-14	
		Percent of Insured Population Receiving Medicaid	Insurance - Population Receiving Medicaid	Social & Economic Factors	Percentage	482,720	n/a	23.4%	20.2%	17.0%	Below benchmark	State	-6.42%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Population Age 25+ with No High School Diploma	Education - Less than High School Diploma (or Equivalent)	Social & Economic Factors	Percentage	336,308	n/a	18.8%	14.0%	13.3%	Below benchmark	State	-5.48%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Percent Uninsured Population	Insurance - Uninsured Population	Social & Economic Factors	Percentage	482,720	n/a	17.8%	14.9%	14.1%	Below benchmark	State	-3.69%	American Community Survey, 5y	2009-13	2009-13	2009-13	

Health Indicators					Data Estimates					Needs Score			Data Source and Year					
Potential Health Needs	Core/ Related	Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable
		Percent Population Receiving SNAP Benefits	Food Security - Population Receiving SNAP	Social & Economic Factors	Percentage	480,144	n/a	10.6%	15.2%	6.5%	Below benchmark	State	-4.04%	US Census Bureau,Small Area Income & Poverty Estimates.	2011	2011	2011	
		Percentage of population reporting food insecurity at some point in the year	n/a	Social and Economic Factors	Percentage	no data	n/a	38.4%	no data	39.0%	Below benchmark	State	0.60%	California Health Interview Survey	2014		2014	
		Percentage of the Population with Food Insecurity	Food Security - Food Insecurity Rate	Social & Economic Factors	Percentage	483,456	n/a	16.2%	15.9%	13.4%	Below benchmark	State	-2.84%	Feeding America	2012	2012	2012	
		Percent of children (age <18) living in households with limited or uncertain access to adequate food	n/a	Social and Economic Factors	Percentage	no data	n/a	26.3%	no data	21.5%	Below benchmark	State	-4.80%	Feeding America, Map the Meal Gap, Accessed via Kidsdata.org	2012		2012	
		Percentage of Workers Commuting More than 60 Minutes	Economic Security - Commute Over 60 Minutes	Social & Economic Factors	Percentage	210,362	n/a	10.1%	8.1%	10.2%	Below benchmark	State	0.05%	American Community Survey, 5y	2009-13	2009-13	2009-13	
		Population receiving MediCal/Medicaid	n/a	Social and Economic Factors	Percentage	no data	n/a	14.0%	no data	18.2%	Below benchmark	State	4.20%	American Community Survey	2014		2014	
		Living wage - Annual income required to support one adult and one child*	n/a	Social and Economic Factors	Number	no data	n/a	\$47,216.00	n/a	\$51,492	n/a	n/a	n/a	calculated from livingwage.mit.edu	2015		2015	
HIV/AIDS/STDs	Core	Chlamydia Infection Rate (Per 100,000 Pop.)	STD - Chlamydia	Health Outcomes	Rate	488,116	n/a	444.9	456.7	318.4	Below benchmark	State	-126.51	US Department of Health & Human Services,Health Indicators Warehouse. Centers for Disease Control and Prevention,National Center for HIV/AIDS, Dermatology and STDs	2012	2012	2012	
		Population with HIV / AIDS, Rate (Per 100,000 Pop.)	STD - HIV Prevalence	Health Outcomes	Rate	409,685	n/a	363.0	340.4	297.7	Below benchmark	State	-65.3	US Department of Health & Human Services,Health Indicators Warehouse. Centers for Disease Control and Prevention,National Center for HIV/AIDS, Dermatology and STDs	2010	2010	2010	
	Related	HIV-related Age-Adjusted Discharge Rate (Per 10,000 Pop.)	STD - HIV Hospitalizations	Clinical Care	Rate	no data	n/a	2.0	no data	0.9	Below benchmark	State	-1.05	California Office of Statewide Health Planning and Development,OSHPD Patient Discharge Data. Additional data analysis by CARES	2011		2011	
		Percent Adults Never Screened for HIV / AIDS	STD - No HIV Screening	Clinical Care	Percentage	357,938	n/a	60.8%	62.8%	53.3%	Below benchmark	State	-7.54%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Additional data analysis by CARES	2011-12	2011-12	2011-12	
Mental Health	Core	Suicide, Age-Adjusted Mortality Rate (per 100,000 Population)	Mortality - Suicide	Health Outcomes	Rate	483,878	<= 10.2	9.8	no data	12.3	Below benchmark	State	2.52	Analysis by CARES, University of Missouri,Center for Applied Research and Environmental Systems. California Department of Public Health,CDPH - Death Public Use Data. Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse.	2010-12		2010-12	
		Average Number of Mentally Unhealthy Days per Month	Mental Health - Poor Mental Health Days	Health Outcomes	Rate	372,268	n/a	3.6	3.5	3.4	Below benchmark	State	-0.2	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse.	2006-12	2006-12	2006-12	
		Percentage of Medicare Beneficiaries with Depression	Mental Health - Depression Among Medicare Beneficiaries	Health Outcomes	Percentage	47,431	n/a	13.4%	15.5%	14.1%	Below benchmark	State	0.68%	Centers for Medicare and Medicaid Services.	2012	2012	2012	
		Poor mental health (likely has serious psychological distress during past year)	n/a	Health Outcomes	Percentage	382,000	n/a	7.7%	no data	9.3%	Below benchmark	State	1.60%	California Health Interview Survey	2014		2014	
		Mental Health Care Provider Rate (Per 100,000 Population)	Access to Mental Health Providers	Clinical Care	Rate	502,544	n/a	157.0	134.1	159.2	Above benchmark	State	2.19	University of Wisconsin Population Health Institute,County Health Rankings.	2014	2014	2014	
		Percent of adults with a physical, mental or emotional disability	n/a	Health Outcomes	Percentage	382,000	n/a	28.5%	no data	29.6%	Below benchmark	State	1.10%	California Health Interview Survey	2014		2014	
		Percent of adults age 65+ with a physical, mental or emotional disability	n/a	Health Outcomes	Percentage	84,000	n/a	51.0%	no data	54.5%	Below benchmark	State	3.50%	California Health Interview Survey	2014		2014	
		Percent of the Medicare fee-for service population with depression	n/a	Health Outcomes	Percentage	no data	n/a	13.4%	15.5%	14.1%	Below benchmark	State	0.67%	Centers for Medicare and Medicaid Services	2012	2012	2012	
		Percent of 11th grade students who felt sad or hopeless almost everyday for 2 weeks or more so that they stopped doing some usual activities	n/a	Health Outcomes	Percentage	no data	n/a	32.5%	no data	31.3%	Below benchmark	State	-1.20%	Healthy Kids Survey	2011-13		2011-13	
	Percent of adults who report needing to see a professional because of prob	Mental Health - Needing Mental Health Care	Health Outcomes	Percentage	382,000	n/a	15.9%	no data	15.2%	Below benchmark	State	-0.70%	California Health Interview Survey	2013-14		2013-14		
	Related	Percent of 11th grade students reporting harassment on school property related to their sexual orientation	n/a	Health Outcomes	Percentage	no data	n/a	8.0%	no data	9.1%	Below benchmark	State	1.10%	Healthy Kids Survey	2011-13		2011-13	
Percent of 11th grade students reporting harassment or bullying on school property within the past 12 months for any reason		n/a	Health Outcomes	Percentage	no data	n/a	28.0%	no data	29.0%	Below benchmark	State	1.00%	Healthy Kids Survey	2011-13		2011-13		

Health Indicators					Data Estimates					Needs Score			Data Source and Year					
Potential Health Needs	Core/ Related	Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable
	Related	Percent of 11th grade students who report they've been victims of cyber bullying in the past 12 months	n/a	Health Outcomes	Percentage	no data	n/a	23.2%	no data	24.0%	Below benchmark	State	0.80%	Healthy Kids Survey	2011-13		2011-13	
		Percent Adults Without Adequate Social / Emotional Support (Age-Adjusted)	Lack of Social or Emotional Support	Social & Economic Factors	Percentage	372,268	n/a	24.6%	20.7%	18.7%	Below benchmark	State	-5.90%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2006-12	2006-12	2006-12	
Obesity and Diabetes	Core	Percent Adults Overweight	Overweight (Adult)	Health Outcomes	Percentage	383,785	n/a	35.9%	35.8%	39.4%	Below benchmark	State	3.56%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2011-12	2011-12	2011-12	
		Percent Adults with BMI > 30.0 (Obese)	Obesity (Adult)	Health Outcomes	Percentage	382,000	≤ 30.5%	27.0%	no data	25.4%	Below benchmark	State	-1.60%	California Health Interview Survey	2014		2014	
		Percent Youth Overweight	Overweight (Youth)	Health Outcomes	Percentage	14,736	n/a	19.3%	no data	20.0%	Below benchmark	State	0.68%	California Department of Education,FITNESSGRAM® Physical Fitness Testing.	2013-14		2013-14	
		Percent Obese Among Children (grades 5, 7, 9)	Obesity (Youth)	Health Outcomes	Percentage	14,736	≤ 16.1%	19.0%	no data	17.5%	Below benchmark	State	-1.46%	California Department of Education,FITNESSGRAM® Physical Fitness Testing.	2013-14		2013-14	
		Percent Adults with Diagnosed Diabetes (Age-Adjusted)	Diabetes Prevalence	Health Outcomes	Percentage	371,014	n/a	8.1%	9.1%	6.0%	Below benchmark	State	-2.05%	Centers for Disease Control and Prevention,National Center for Chronic Disease Prevention and Health Promotion.	2012	2012	2012	
		Percent of Medicare fee-for-service population with diabetes	n/a	Health Outcomes	Percentage	no data	n/a	26.6%	27.0%	18.4%	Below benchmark	State	-8.20%	Centers for Medicare and Medicaid Services	2011-13	2011-13	2011-13	
		Diabetes mortality rate (age-adjusted)	n/a	Health Outcomes	Rate	no data	n/a	20.8	no data	18.2	Below benchmark	State	-2.60	California Department of Public Health	2011-13		2011-13	
		Diabetes-related Age-Adjusted Discharge Rate (Per 10,000 Pop.)	Diabetes Hospitalizations	Health Outcomes	Rate	no data	n/a	10.4	no data	6.9	Below benchmark	State	-3.48	California Office of Statewide Health Planning and Development,OSHPD Patient Discharge Data. Additional data analysis by CARES.	2011		2011	
		Percent Adults with Inadequate Fruit / Vegetable Consumption	Low Fruit/Vegetable Consumption (Adult)	Health Behaviors	Percentage	359,017	n/a	71.5%	75.7%	69.9%	Below benchmark	State	-1.60%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2005-09	2005-09	2005-09	
		Percent Population Age 2-13 with Inadequate Fruit/Vegetable Consumption	Low Fruit/Vegetable Consumption (Youth)	Health Behaviors	Percentage	59,000	n/a	47.4%	no data	29.5%	Below benchmark	State	-17.90%	California Health Interview Survey	2011-12		2011-12	
		Fruit / Vegetable Expenditures, Percentage of Total Food-At-Home Expenditures	Fruit/Vegetable Expenditures	Health Behaviors	Percentage	no data	n/a	14.1%	12.7%	suppressed	Above benchmark	State		Nielsen, Nielsen SiteReports	2014	2014	2014	
		Soda Expenditures, Percentage of Total Food-At-Home Expenditures	Soft Drink Expenditures	Health Behaviors	Percentage	no data	n/a	3.6%	4.0%	suppressed	Below benchmark	State		Nielsen, Nielsen SiteReports	2014	2014	2014	
		Fast Food Restaurants, Rate (Per 100,000 Population)	Food Environment - Fast Food Restaurants	Physical Environment	Rate	483,878	n/a	74.5	72.0	61.6	Below benchmark	State	-12.92	US Census Bureau,County Business Patterns. Additional data analysis by CARES.	2011	2011	2011	
		Grocery Stores, Rate (Per 100,000 Population)	Food Environment - Grocery Stores	Physical Environment	Rate	483,878	n/a	21.5	21.1	28.1	Above benchmark	State	6.60	US Census Bureau,County Business Patterns. Additional data analysis by CARES.	2011	2011	2011	
		WIC-Authorized Food Stores, Rate (Per 100,000 Population)	Food Environment - WIC-Authorized Food Stores	Physical Environment	Rate	488,119	n/a	15.8	15.6	14.8	Above benchmark	State	-1.05	US Department of Agriculture,Economic Research Service,USDA - Food Environment Atlas.	2011	2011	2011	
		Percent Population with Low Food Access	Food Security - Food Desert Population	Social & Economic Factors	Percentage	483,878	n/a	14.3%	23.6%	17.0%	Below benchmark	State	2.72%	US Department of Agriculture,Economic Research Service,USDA - Food Access Research Atlas.	2010	2010	2010	
		Percent Population with no Leisure Time Physical Activity	Physical Inactivity (Adult)	Health Behaviors	Percentage	373,106	n/a	16.6%	22.6%	12.8%	Below benchmark	State	-3.79%	Centers for Disease Control and Prevention,National Center for Chronic Disease Prevention and Health Promotion.	2012	2012	2012	
		Percent Physically Inactive (Youth)	Physical Inactivity (Youth)	Health Behaviors	Percentage	14,736	n/a	35.9%	no data	32.0%	Below benchmark	State	-3.88%	California Department of Education,FITNESSGRAM® Physical Fitness Testing.	2013-14		2013-14	
		Percent Population Within 1/2 Mile of a Park	Park Access	Physical Environment	Percentage	483,878	n/a	58.6%	no data	58.1%	Above benchmark	State	-0.53%	US Census Bureau,Decennial Census. ESRI Map Gallery.	2010		2010	
		Recreation and Fitness Facilities, Rate (Per 100,000 Population)	Recreation and Fitness Facility Access	Physical Environment	Rate	483,878	n/a	8.7	9.4	12.6	Above benchmark	State	3.96	US Census Bureau,County Business Patterns. Additional data analysis by CARES.	2012	2012	2012	
	Related	Percentage of Mothers Breastfeeding (Any)	Breastfeeding (Any)	Health Behaviors	Percentage	4,354	n/a	93.0%	no data	97.7%	Above benchmark	State	4.67%	California Department of Public Health,CDPH - Breastfeeding Statistics.	2012		2012	

Health Indicators										Data Estimates				Needs Score			Data Source and Year				
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		Percentage of Mothers Breastfeeding (Exclusively)	Breastfeeding (Exclusive)	Health Behaviors	Percentage	4,354	n/a	64.8%	no data	85.2%	Above benchmark	State	20.42%	California Department of Public Health, CDPH - Breastfeeding Statistics.	2012		2012				
		Average Daily School Breakfast Program Participation Rate	Food Security- School Breakfast Program	Social & Economic Factors	Rate	no data	n/a	3.9	4.2	no data		Below benchmark	State		US Department of Agriculture Food and Nutrition Service, USDA - Child Nutrition Program.	2013	2013				
		Percentage of Workers Commuting More than 60 Minutes	Economic Security - Commute Over 60 Minutes	Social & Economic Factors	Percentage	210,362	n/a	10.1%	8.1%	10.2%		Below benchmark	State	0.05%	American Community Survey	2012	2012				
		Percentage of the Population with Food Insecurity	Food Security - Food Insecurity Rate	Social & Economic Factors	Percentage	483,456	n/a	16.2%	15.9%	13.4%		Below benchmark	State	-2.84%	Feeding America	2012	2012				
		Percentage of Population Potentially Exposed to Unsafe Drinking Water	Drinking Water Safety	Physical Environment	Percentage	265,167	n/a	2.7%	10.3%	0.4%		Below benchmark	State	-2.28%	University of Wisconsin Population Health Institute, County Health Rankings.	2012-13	2012-13	2012-13			
		Percent Medicare Enrollees with Diabetes with Annual Exam	Diabetes Management (Hemoglobin A1c Test)	Clinical Care	Percentage	37,379	n/a	81.5%	84.6%	82.0%		Above benchmark	State	0.52%	Dartmouth College Institute for Health Policy & Clinical Practice, Dartmouth Atlas of Health Care.	2012	2012	2012			
		Percentage of Workers Commuting by Car, Alone	Commute to Work - Alone in Car	Health Behaviors	Percentage	225,640	n/a	73.2%	76.4%	76.0%		Below benchmark	State	2.85%	American Community Survey, 5y	2009-13	2009-13	2009-13			
		Percent of children age 2-11 drinking one or more sugar sweetened beverages (other than soda) on previous day	n/a	Health Behaviors	Percentage	49,000	n/a	18.8%	no data	16.1%		Below benchmark	State	-2.70%	California Health Interview Survey	2014	2014	2014			
		Percent of children under 18 consuming fast food at least once in past week	n/a	Health Behaviors	Percentage	99,000	n/a	72.3%	no data	48.8%		Below benchmark	State	-23.50%	California Health Interview Survey	2014		2014			
		Percent of 11th grade students who report eating breakfast on day of survey	n/a	Health Behaviors	Percentage	no data	n/a	60.6%	no data	60.5%		Above benchmark	State	-0.10%	California Healthy Kids Survey	2011-13		2011-13			
		Percentage Walking or Biking to Work	Commute to Work - Walking/Biking	Health Behaviors	Percentage	225,640	n/a	3.8%	3.4%	4.1%		Above benchmark	State	0.26%	American Community Survey, 5y	2009-13	2009-13	2009-13			
		Percentage Walking/Scating/Biking to School	Walking/Biking/Scating to School	Health Behaviors	Percentage	94,828	n/a	43.0%	no data	34.8%		Above benchmark	State	-8.20%	California Health Interview Survey	2011-12		2011-12			
Oral Health	Core	Percent Adults with Poor Dental Health	Poor Dental Health	Health Outcomes	Percentage	367,525	n/a	11.3%	15.7%	9.2%	Below benchmark	State	-2.03%	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CHHS.	2006-10	2006-10	2006-10				
		Percent Adults 18-64 Without Recent Dental Exam	n/a	Clinical Care	Percentage	no data	n/a	32.0%	no data	31.5%	Below benchmark	State		California Health Interview Survey	2013-14		2013-14				
		Percentage of children (age 2-11) who self-report that they have not visited a dentist, dental hygienist or dental clinic within the past year (dental care utilization) - Youth	Percent Youth Without Recent Dental Exam	Clinical Care	Percentage	49,000	n/a	9.9%	no data	2.8%	Below benchmark	State	-7.10%	California Health Interview Survey	2014		2014				
		Percent of Kindergarteners and 3rd graders with tooth decay	n/a	Health Outcomes	Percentage	no data	n/a	no data	no data	51.0%				Sonoma County Smile Survey			2014				
		Percent Adults Without Dental Insurance	Absence of Dental Insurance Coverage	Clinical Care	Percentage	759,000	n/a	no data	no data	38.9%	Below benchmark	State		California Health Interview Survey			2013-14				
		Percent of adults age 65+ Without Dental Insurance	n/a	Clinical Care	Percentage	170,000	n/a	no data	no data	51.8%	Below benchmark	State		California Health Interview Survey			2013-14				
		Dentists, Rate per 100,000 Pop.	Access to Dentists	Clinical Care	Rate	495,025	n/a	77.5	63.2	85.9	Above benchmark	State	8.40	US Department of Health & Human Services, Health Resources and Services Administration, Area Health Resource File.	2013	2013	2013				
		Percent Population Age 5-17 Unable to Afford Dental Care	Dental Care - Lack of Affordability (Youth)	Clinical Care	Percentage	108,000	n/a	6.3%	no data	10.4%	Below benchmark	State	4.10%	California Health Interview Survey	2009		2009				
		Provider-to- Beneficiary Ratio for Dental Service Offices and Providers Willing to provide dental services	n/a	Clinical Care	Ratio	n/a	n/a	no data	no data	11: 2,1550				California State Auditor's analyses of data from systems administered by the California Department of Health Care Services, Health Resources and Services Administration, Health Care Financing Administration, Health Resources and Services Administration.			2013				
		Percentage of Population Living in a HPSA	Health Professional Shortage Area - Dental	Clinical Care	Percentage	483,878	n/a	4.9%	32.0%	0.0%	Below benchmark	State	-4.93%		2015	2015	2015				
		Soda Expenditures, Percentage of Total Food-At-Home Expenditures	Soft Drink Expenditures	Health Behaviors	Percentage	no data	n/a	3.6%	4.0%	suppressed		Below benchmark	State		Nielsen, Nielsen Storeports	2014	2014	2014			

Health Indicators					Data Estimates						Needs Score			Data Source and Year				
Potential Health Needs	Core/ Related	Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable
	Related	Percent of children age 2-11 drinking one or more sugar sweetened beverages (other than soda) on previous day	n/a	Health Behaviors	Percentage	49,000	n/a	18.8%	no data	16.1%				California Health Interview Survey	2014		2014	
		Percentage of Population Potentially Exposed to Unsafe Drinking Water	Drinking Water Safety	Physical Environment	Percentage	265,167	n/a	2.7%	10.3%	0.41%	Below benchmark	State	-2.28%	University of Wisconsin Population Health Institute,County Health Rankings.	2012-13	2012-13	2012-13	
Overall Health	Core	Percent Adults with Poor or Fair Health (Age-Adjusted)	Poor General Health	Health Outcomes	Percentage	382,000	n/a	18.4%	no data	22.0%	Below benchmark	State	3.59%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2006-12		2006-12	
		Years of Potential Life Lost, Rate per 100,000 Population	Mortality - Premature Death	Health Outcomes	Rate	488,116	n/a	5594	6851	5232	Below benchmark	State	-362.00	University of Wisconsin Population Health Institute,County Health Rankings. Centers for Disease Control and Prevention,National Vital Statistics System.	2008-10	2008-10	2008-10	
		Percent of children age 0-12 considered in excellent or very good health	n/a	Health Outcomes	Percentage	59,000	n/a	78.7%	no data	76.2%	Above benchmark	State	-2.48%	California Health Interview Survey	2014		2014	
		Percent Population Age 65+ with Pneumonia Vaccination (Age-Adjusted)	Pneumonia Vaccinations (Age 65+)	Clinical Care	Percentage	65,602	n/a	63.4%	67.5%	65.2%	Above benchmark	State	1.80%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2006-12	2006-12	2006-12	
		Age adjusted death rate, all causes	n/a	Health Outcomes	Rate	no data	n/a	654.9	821.5	627.9	Below benchmark	State	-27.00	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System	2009-11	2013	2011-13	
		Child mortality, 1-4 years (per 100,000)	n/a	Health Outcomes	Rate	no data	<=25.7	20.0	26.0	LNE	Below benchmark	State		American Community Survey	2010	2010	2010	
		Child mortality, 5-14 years (per 100,000)	n/a	Health Outcomes	Rate	LNE	n/a	10.0	13.0	LNE	Below benchmark	State		California Department of Public Health / US from CDC Deaths	2011-13	2013		
		Premature death/ Years of Potential Life Lost before age 75 per 100,000 population	n/a	Health Outcomes	Rate	no data	n/a	5594.0	6851.0	5232.0	Below benchmark	State	-362.00	University of Wisconsin Population Health Institute, County Health Rankings. Centers for Disease Control and Prevention, National Vital Statistics System. Accessed	2008-10	2008-10	2008-10	
		Percent of adults with a physical, mental or emotional disability	n/a	Health Outcomes	Percentage	382,000	n/a	28.5%	no data	29.6%	Below benchmark	State	1.10%	California Health Interview Survey	2014		2014	X
		Percent of adults age 65+ with a physical, mental or emotional disability	n/a	Health Outcomes	Percentage	84,000	n/a	51.0%	no data	54.5%	Below benchmark	State	3.50%	California Health Interview Survey	2014		2014	
		Percent Population with a Disability	Population with Any Disability	Health Outcomes	Percentage	482,720	n/a	10.1%	12.1%	10.8%	Below benchmark	State	0.62%	American Community Survey, 5y	2009-13	2009-13	2009-13	
Pregnancy and Birth Outcomes	Core	Infant Mortality Rate (Per 1,000 Births)	Infant Mortality	Health Outcomes	Rate	28,655	<= 6.0	5.0	6.5	4.2	Below benchmark	State	-0.80	Centers for Disease Control and Prevention,National Vital Statistics System. Accessed via CDC WONDER. Centers for Disease Control and Prevention,Wide-	2006-10	2006-10	2006-10	
		Percent Mothers with Late or No Prenatal Care	Lack of Prenatal Care	Clinical Care	Percentage	483,878	n/a	3.1%	no data	no data	Below benchmark	State		California Department of Public Health,CDPH - Birth Profiles by ZIP Code.	2011			
		Percent of pre-term births (< 37 weeks gestation)	n/a	Health Outcomes	Percentage	no data	<=11.4%	8.8%	11.4%	7.4%	Below benchmark	State	-1.40%	California Dept. of Public Health, Center for Health Statistics, Birth Statistical Master Files; Centers for Disease Control & Prevention, Natality data on CDC	2013	2013	2013	
		Percent Low Birth Weight Births	Low Birth Weight	Health Outcomes	Percentage	483,878	n/a	6.8%	no data	5.8%	Below benchmark	State	-1.01%	California Department of Public Health,CDPH - Birth Profiles by ZIP Code.	2011		2011	
		Low Birth Weight	Percent of newborns with very low birth weight	Health Outcomes	Percentage	no data	<=1.4%	1.1%	1.5%	1.0%	Below benchmark	State	-0.10%	California Department of Public Health/ Centers for Disease Control and Prevention, National Vital Statistics System / HP2020	2011	2007	2007-11	
		Teen Birth Rate (Per 1,000 Female Pop. Under Age 20)	Teen Births (Under Age 20)	Social & Economic Factors	Rate	58,712	n/a	8.5	no data	6.1	Below benchmark	State	-2.41	California Department of Public Health,CDPH - Birth Profiles by ZIP Code.	2011		2011	
	Related	Percentage of Mothers Breastfeeding (Any)	Breastfeeding (Any)	Health Behaviors	Percentage	4,354	n/a	93.0%	no data	97.7%	Above benchmark	State	4.67%	California Department of Public Health,CDPH - Breastfeeding Statistics.	2012		2012	
		Percentage of Mothers Breastfeeding (Exclusively)	Breastfeeding (Exclusive)	Health Behaviors	Percentage	4,354	n/a	64.8%	no data	85.2%	Above benchmark	State	20.42%	California Department of Public Health,CDPH - Breastfeeding Statistics.	2012		2012	
		Rank of pesticides use among California counties	n/a	Physical Environment	Number	n/a	n/a	n/a	n/a	21	Below benchmark	n/a		California Department of Pesticide Regulation			2013	
		Percentage of the Population with Food Insecurity	Food Security - Food Insecurity Rate	Social & Economic Factors	Percentage	483,456	n/a	16.2%	15.9%	13.4%	Below benchmark	State	-2.84%	Feeding America	2012	2012	2012	

Health Indicators					Data Estimates					Needs Score			Data Source and Year					
Potential Health Needs	Core/ Related Indicator		Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable
Substance Abuse and Tobacco	Core	Percent Population Smoking Cigarettes(Age-Adjusted)	Tobacco Usage	Health Behaviors	Percentage	372,268	n/a	12.8%	18.1%	15.1%	Below benchmark	State	2.30%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2006-12	2006-12	2006-12	
		Cigarette Expenditures, Percentage of Total Household Expenditures	Tobacco Expenditures	Health Behaviors	Percentage	no data	n/a	1.0%	1.6%	suppressed	Below benchmark	State		Nielsen, Nielsen SiteReports	2014	2014	2014	
		Estimated Adults Drinking Excessively(Age-Adjusted Percentage)	Alcohol - Excessive Consumption	Health Behaviors	Percentage	372,268	n/a	17.2%	16.9%	21.3%	Below benchmark	State	4.10%	Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2006-12	2006-12	2006-12	
		Percent of 11th grade students reporting driving after drinking (respondent or by friend)	n/a	Health Behaviors	Percentage	no data	<=25.5%	25.0%	n/a	24.4%	Below benchmark	State	-0.60%	California Healthy Kids Survey	2011-13		2011-13	
		Percent of 11th grade students using cigarettes any time within last 30 days	n/a	Health Behaviors	Percentage	no data	n/a	10.2%	n/a	13.8%	Below benchmark	State	3.60%	California Healthy Kids Survey	2011-13		2011-13	
		Percent of 11th grade students reporting marijuana use within the last 30 days	n/a	Health Behaviors	Percentage	no data	n/a	22.0%	n/a	28.0%	Below benchmark	State	6.00%	California Healthy Kids Survey	2011-13		2011-13	
		Alcoholic Beverage Expenditures, Percentage of Total Food-At-Home Expenditures	Alcohol - Expenditures	Health Behaviors	Percentage	no data	n/a	12.9%	14.3%	suppressed	Below benchmark	State		Nielsen, Nielsen SiteReports	2014	2014	2014	
		Liquor Stores, Rate (Per 100,000 Population)	Liquor Store Access	Physical Environment	Rate	483,878	n/a	10.0	10.4	13.4	Below benchmark	State	3.41	US Census Bureau,County Business Patterns. Additional data analysis by CARES.	2012	2012	2012	
Vaccine Preventable Infectious Disease	Core	Influenza Vaccinated older adults(65+), age-adjusted	n/a	Health Outcomes	Percentage	no data	n/a	64.3%	no data	64.8%	Below benchmark	State		Behavioral Risk Factor Surveillance System (BRFSS)	2006-12		2006-12	
		Percentage of adults age 65+ who have ever received a pneumonia vaccination	n/a	Clinical Care	Percentage	no data	n/a	63.4%	67.5%	65.2%	Above benchmark	State	1.80%	Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System	2006-12	2006-13	2006-12	
		Percent of kindergarteners with all required immunizations	n/a	Clinical Care	Percentage	no data	n/a	90.4%	no data	90.0%	Above benchmark	State	-0.40%	CDPH Immunization Branch (data accessed through kidsdata.org)	2014-15		2014-15	
Violence and Unintentional Injury	Core	Homicide, Age-Adjusted Mortality Rate (per 100,000 Population)	Mortality - Homicide	Health Outcomes	Rate	483,878	<= 5.5	5.2	no data	2.4	Below benchmark	State	-2.74	University of Missouri,Center for Applied Research and Environmental Systems. California Department of Public Health,CDPH - Death Public Use Data	2010-12		2010-12	
		Suicide, Age-Adjusted Mortality Rate (per 100,000 Population)	Mortality - Suicide	Health Outcomes	Rate	483,878	<= 10.2	9.8	no data	12.3	Below benchmark	State	2.52	University of Missouri,Center for Applied Research and Environmental Systems. California Department of Public Health,CDPH - Death Public Use Data	2010-12		2010-12	
		Motor Vehicle Accident, Age-Adjusted Mortality Rate (per 100,000 Population)	Mortality - Motor Vehicle Accident	Health Outcomes	Rate	483,878	<= 12.4	5.2	no data	2.5	Below benchmark	State	-2.68	University of Missouri,Center for Applied Research and Environmental Systems. California Department of Public Health,CDPH - Death Public Use Data	2010-12		2010-12	
		Pedestrian Accident, Age-Adjusted Mortality Rate (per 100,000 Population)	Mortality - Pedestrian Accident	Health Outcomes	Rate	483,878	<= 1.3	2.0	no data	1.1	Below benchmark	State	-0.85	University of Missouri,Center for Applied Research and Environmental Systems. California Department of Public Health,CDPH - Death Public Use Data	2010-12		2010-12	
		Intentional Injuries, Rate per 100,000 Population (Youth Age 13 - 20)	Violence - Youth Intentional Injury	Social & Economic Factors	Rate	52,213	n/a	738.7	no data	704.8	Below benchmark	State	-33.90	3-year averages for 2011-2013 generated using the California EpiCenter data platform for Overall Injury Surveillance	2011-13		2011-13	
		Assault Injuries, Rate per 100,000 Population	Violence - Assault (Injury)	Social & Economic Factors	Rate	489,214	n/a	290.3	no data	203.9	Below benchmark	State	-86.37	3-year averages for 2011-2013 generated using the California EpiCenter data platform for Overall Injury Surveillance	2011-13		2011-13	
		Domestic Violence Injuries, Rate per 100,000 Population (Females Age 10+)	Violence - Domestic Violence	Social & Economic Factors	Rate	220,649	n/a	9.5	no data	5.9	Below benchmark	State	-3.61	3-year averages for 2011-2013 generated using the California EpiCenter data platform for Overall Injury Surveillance	2011-13		2011-13	
		Assault Rate (Per 100,000 Pop.)	Violence - Assault (Crime)	Social & Economic Factors	Rate	488,695	n/a	249.4	246.9	285.7	Below benchmark	State	36.26	Federal Bureau of Investigation,FBI Uniform Crime Reports. Additional analysis by the National Archive of Criminal Justice Data. Accessed via the Inter-university	2010-12	2010-12	2010-12	
		Violent Crime Rate (Per 100,000 Pop.)	Violence - All Violent Crimes	Social & Economic Factors	Rate	488,695	n/a	425.0	395.5	366.3	Below benchmark	State	-58.72	Federal Bureau of Investigation,FBI Uniform Crime Reports. Additional analysis by the National Archive of Criminal Justice Data. Accessed via the Inter-university	2010-12	2010-12	2010-12	
		Substantiated allegations of child maltreatment per 1,000 children ages 0-17	n/a	Health Outcomes	Rate	no data	<=8.5	8.7	no data	4.5	Below benchmark	State	-4.20	California Child Welfare Indicators Project	2014		2014	
		Unintentional injury mortality rate (age-adjusted, per 100,000 pop.)	n/a	Health Outcomes	Rate	no data	<=36.0	27.9	no data	24.7	Below benchmark	State	-3.20	2015 County Health Status Profiles, California Department of Public Health	2011-13		2011-13	
		Percentage of 11th grade students reporting current gang involvement	n/a	Social and Economic Factors	Percentage	no data	n/a	7.5%	no data	8.0%	Below benchmark	State	0.50%	California Healthy Kids Survey	2011-13		2011-13	

Health Indicators					Data Estimates					Needs Score			Data Source and Year							
Potential Health Needs	Core/ Related		Indicator	Kaiser Indicator Name	MATCH Category	Measure Type	County Population Denominator	HP 2020 Value	California State Benchmark	United States Benchmark	Sonoma County	Desired direction	Benchmark used to score	Difference from benchmark	Data Source	State Data Year	National Data Year	County Area Year	County data statistically unstable	
			Rate of domestic violence calls for assistance per 1,000 population	n/a	Social and Economic Factors	Rate	no data	n/a	6.0	no data	4.6	Below benchmark	State	-1.40	California Department of Justice, Criminal Justice Statistics Center (via Kidsdata.org)	2014		2014		
			Percent of adults reporting ever experiencing physical or sexual violence by an intimate partner since age 18	n/a	Social and Economic Factors	Percentage	307,000	n/a	14.8%	no data	17.7%	Below benchmark	State	2.90%	California Health Interview Survey	2009		2009		
			Percent of adults reporting experiencing physical or sexual violence by an intimate partner in past year	n/a	Social and Economic Factors	Percentage	307,000	n/a	3.5%	no data	3.4%	Below benchmark	State	-0.10%	California Health Interview Survey	2009		2009	X	
	Related		Robbery Rate (Per 100,000 Pop.)	Violence - Robbery (Crime)	Social & Economic Factors	Rate	488,695	n/a	149.5	116.4	50.8	Below benchmark	State	-98.68	Federal Bureau of Investigation,FBI Uniform Crime Reports. Additional analysis by the National Archive of Criminal Justice Data. Accessed via the Inter-university Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse. US	2010-12	2010-12	2010-12		
			Estimated Adults Drinking Excessively(Age-Adjusted Percentage)	Alcohol - Excessive Consumption	Health Behaviors	Percentage	372,268	n/a	17.2%	16.9%	21.3%	Below benchmark	State	4.10%	US Census Bureau,County Business Patterns. Additional data analysis by CARES.	2006-12	2006-12	2006-12		
			Liquor Stores, Rate (Per 100,000 Population)	Liquor Store Access	Physical Environment	Rate	483,878	n/a	10.0	10.4	13.4	Below benchmark	State	3.41	Federal Bureau of Investigation,FBI Uniform Crime Reports. Additional analysis by the National Archive of Criminal Justice Data. Accessed via the Inter-university	2012	2012	2012		
			Rape Rate (Per 100,000 Pop.)	Violence - Rape (Crime)	Social & Economic Factors	Rate	488,695	n/a	21.0	27.3	28.4	Below benchmark	State	7.37	California Department of Education	2010-12	2010-12	2010-12		
			School Suspensions (per 100 enrolled students)	Violence - School Suspensions	Social & Economic Factors	Rate	141,365	n/a	4.0	no data	4.4	Below benchmark	State	0.37	California Department of Education	2013		2013		
			School Expulsions (per 100 enrolled students)	Violence - School Expulsions	Social & Economic Factors	Rate	141,365	n/a	0.1	no data	0.0	Below benchmark	State	-0.01	California Department of Education	2013		2013		
			Percent of 11th grade students reporting driving after drinking (respondent or by friend)	n/a	Health Behaviors	Percentage	no data	<=25.5%	25.0%	no data	24.4%	Below benchmark	State	-0.60%	California Healthy Kids Survey	2011-13		2011-13		
	Youth Growth and Development	Core		Teen Birth Rate (Per 1,000 Female Pop. Under Age 20)	Teen Births (Under Age 20)	Social & Economic Factors	Rate	58,712	n/a	8.5	no data	6.1	Below benchmark	State	-2.41	California Department of Public Health,CDPH - Birth Profiles by ZIP Code.	2011		2011	
				Suspension Rate	School Suspensions (per 100 enrolled students)	Social & Economic Factors	Rate	141,365	n/a	4.0	no data	4.4	Below benchmark	State	0.37	California Department of Education	2013		2013	
				Expulsion Rate	School Expulsions (per 100 enrolled students)	Social & Economic Factors	Rate	141,365	n/a	0.1	no data	0.0	Below benchmark	State	-0.01	California Department of Education	2013		2013	
			Percent of English language learners (grade 10) who passed the California High School Exit Exam in English Language Arts (ELA)	n/a	Social and Economic Factors	Percentage	no data	n/a	38.0%	n/a	39.0%	Above benchmark	State	1.00%	California Department of Education	2013-14		2013-14		
			Percent of English language learners (grade 10) who passed the California High School Exit Exam in Math	n/a	Social and Economic Factors	Percentage	no data	n/a	54.0%	n/a	55.0%	Above benchmark	State	1.00%	California Department of Education	2013-14		2013-14		
			Percent of children in foster care system for more than 8 days but less than 12 months with 2 or less placements (placement stability)	n/a	Social and Economic Factors	Percentage	no data	n/a	86.6%	no data	85.3%	Above benchmark	State	-1.30%	California Child Welfare Indicators Project (CCWIP)	2013-14		2013-14		

Sonoma County

Community Health Needs Assessment

Appendix C. Community Input Tracking Form

Data Collection Method	Title/Name	Number	Target Group(s) Represented (interviewee or at least one participant in the focus group self-identified as a leader, member, or representative of the following populations)					Date Input Was Gathered
Meeting, focus group, interview, survey, written correspondence, etc.	Respondent's title/role and name or focus group population	Number of participants	Health Department representative	Chronic Condition	Minority	Medically underserved	Low-income	Date of data collection
Interview	Executive Director, Sonoma County Task Force on the Homeless	1		X	X	X	X	10/7/15
Interview	Director, Clinical Health Services	1						10/6/15
Interview	Vice President for Programs, Community Foundation Sonoma County	1						10/2/15
Interview	Division Director, Sonoma County Behavioral Health	1		X	X	X	X	10/8/15
Interview	Executive Director, The John Jordan Foundation	1		X	X	X	X	N/A
Interview	Health Officer, County of Sonoma	1	X					10/7/15
Interview	Chief Medical Officer, Alliance Medical Centers	1		X	X	X	X	10/23/15
Interview	Chief Executive Officer, Santa Rosa Community Health Centers	1						10/6/15
Interview	Chief Administrative Officer, Petaluma Health Center	1						9/29/15

Meeting, focus group, interview, survey, written correspondence, etc.	Respondent's title/role and name or focus group population	Number of participants	Health Department representative	Chronic Condition	Minority	Medically underserved	Low-income	Date of data collection
Interview	Executive Director, Northern California Center for Well-being	1		X	X	X	X	10/6/15
Interview	Chief Administrative Officer, Sutter Medical Center	1				X		10/21/15
Interview	Program Analyst, Mayor's Gang Prevention Task Force at City of Santa Rosa	1						10/20/15
Interview	Executive Director, Hanna Boys Center	1						10/16/15
Interview	County Superintendent, Sonoma County Office of Education	1		X				10/7/15
Interview	Executive Director, Community Child Care Council of Sonoma County	1						10/7/15
Interview	President, Santa Rosa Junior College	1			X		X	9/29/15
Interview	Division Director, Adult and Aging Services	1						10/8/15
Interview	Program Director, VOICES	1			X	X	X	10/1/15

Meeting, focus group, interview, survey, written correspondence, etc.	Respondent's title/role and name or focus group population	Number of participants	Health Department representative	Chronic Condition	Minority	Medically underserved	Low-income	Date of data collection
Interview	Division Director, Family, Youth and Children's Services Human Services Department	1						10/2/15
Interview	CEO, YWCA	1		X	X	X	X	10/19/15
Interview	Regional Director, 10,000 Degrees	1			X		X	10/12/15
Focus Groups	Sonoma Springs	14		X	X	X		10/20/15
Focus Groups	Roseland; Latino Population	16		X	X	X		10/19/15
Focus Groups	Cloverdale	15			X	X		10/13/15
Focus Groups	Russian River	16		X	X	X		10/29/15
Focus Groups	Petaluma	3				X		10/19/15

Sonoma County Community Health Needs Assessment

Appendix C. Community Input Tracking Form

Key Informant Interview Protocol
FINAL

Interviewee: _____

Date: _____

Organization: _____

Interviewer: _____

Introduction

Hello, my name is _____ and I work for Harder+Company Community Research. We are working with several Sonoma non-profit hospitals, as well as Health Action, on a comprehensive Community Health Needs Assessment (CHNA).

You have been identified as an individual with extensive and important knowledge of the *[Sonoma County Community / Specific subpopulation of Sonoma County]* that can help us with the CHNA -- to help ensure that we get a clear picture of health-related issues that impact our Sonoma County residents. We are very interested in having you share thoughts and ideas that go beyond access to medical care, taking into consideration social, economic, and environmental factors that impact health. Your input will inform the development of the CHNA as well as a community health implementation plan for all of Sonoma County

This interview will take about 30-45 minutes. Our discussion today will be incorporated into the Community Health Needs Assessment for Marin County. Everything we talk about today is confidential. That means that when I write up a report of what was said, I won't use your name or any other information to identify who you are. However, there is always a chance that someone is able to identify what you said.

Do you have any questions so far?

Before we start talking about the specifics, I want to make sure you know that, during this interview:

We consider you the expert!

There is no right or wrong answer, just your ideas.

It's ok if you don't have an answer or opinion about a particular question. It is just as important for us to know that too. "I don't know" is an ok thing to say. And finally,

If at any time while we are talking you are not sure what I mean or have questions, do not hesitate to ask questions and let me know.

I would like to take notes and record during the interview so that I make sure that I get your statements exactly how you stated them.

Is it ok for me to take notes? Great! Just as a reminder, since I will be typing notes, there might be some short delays to make sure I am able to capture everything you say.

Is it ok for me to record our conversation?

Before we begin, do you have any questions?

Questions

1. a) Would you give me a brief description of your organization, and your role there?
b) Within Sonoma County, what geographic area do you primarily serve?
2. a) What are the **most important health needs** that have the greatest impact on overall health in Sonoma County?
b) What are the specific populations that are most adversely affected by these health problems?
c) The following were identified as priority health issues during the previous CHNA process in 2013:
 - i. Significant Health Issues:
 1. **Healthy eating and physical fitness**
 2. **Access to primary care**
 3. **Substance Abuse and access to services**
 4. **Barriers to Healthy Aging**
 5. **Mental Health and access to services**

Can you tell me your thoughts on this?

- d) What existing community assets and resources could be used to address these health issues and inequities [and the health issues you think are most important]?
3. a) What health behaviors do you think have the biggest influence on these issues in your community?
b) The following were identified as significant health behaviors during the previous CHNA process in 2013:
 - i. Significant information about health behaviors:
 1. 16% of adults age 18-59 were current smokers.
 2. 24% of 11th graders reported ever taking prescription painkillers.
 3. 43% of adults reported binge drinking during the previous year.
 4. 15.3% of adults 60+ reported having no leisure time physical activity.
 5. 57.4% of adults 18-59 saw a healthcare provider when they needed help for an emotional problem or use of alcohol/drugs.

What are your thoughts on these data?

- c) What existing community assets and resources could be used to address these health issues and inequities [i.e. the health issues we just mentioned or those you identified earlier]?
4. a) What social factors do you think have the biggest influence on these issues for your clients/your community?

b) What economic factors do you think have the biggest influence on these issues for your clients/your community?

c) The following were identified as socioeconomic conditions in Sonoma during the previous CHNA process in 2013:

i. Significant information about socioeconomic conditions:

1. In 2010, 10.27% of Sonoma County residents reported annual incomes below the Federal Poverty Line. 21% of Hispanics reported annual incomes below the Federal Poverty Line.
2. 55.8% of Sonoma County residents were spending at least 30% of household income on housing/rent.
3. In 2010, an estimated 54,165 Sonoma County residents were eligible for the Cal Fresh Program. 63% of these residents were not enrolled.
4. 13.8% of adults age 25+ had less than a high school diploma.
5. 14% of Sonoma County residents were uninsured.

Can you tell me your thoughts on these data?

d) What existing community resources could be used to address these health issues and inequities?

5. a) What environmental factors do you think have the biggest influence on these issues for your clients/your community?

b) The following were identified as environmental conditions in Sonoma during the previous CHNA process in 2013:

i. Significant information about environmental issues:

1. Community members identified a lack of access to health food.
2. Lack of transportation was identified by community members as one reason for a lack of access to primary care.
3. Key informants recognized substance abuse treatment services as a critical gap in Sonoma County.
4. Geographic and social isolation were identified as creating significant barriers to accessing basic services such as transportation, safe housing, health care, nutritious food and opportunities for socialization. These barriers are compounded for seniors living in poverty.
5. The previous CHNA identified a need for more basic mental health services in outlying communities.

Can you tell me your thoughts on these data?

c) What existing community resources could be used to address these health issues and inequities?

6. What are the **challenges** Sonoma County faces in addressing the health needs you mentioned previously?

a) Are there any current trends that may have an important impact on the health of Sonoma County residents?

b) Are there any challenges that may impact economic opportunities in the community? Access to health care services? Community engagement? Public safety?

7. a) Do you have suggestions for **systems-level collaborations or changes** that could help to address the inequities we just talked about?

b) Looking across all sectors, who are some **current or potential community partners** that we have not yet engaged who could help to impact these issues?

We have a demographics question we would like to ask. This is strictly for tracking purposes and you do not have to answer if you don't want to.

8. Do you identify as a leader, representative, or member of any of the following communities? Please select all that apply.

- ☐ Individuals with chronic conditions
- ☐ Minorities
- ☐ Medically underserved
- ☐ Low-income

Those are all the questions I have for you today. Do you have anything else you would like to add?

Thank you for taking the time to have this conversation! The information that you provided will be very helpful not only for the needs assessment but also in crafting actions to address those needs.

Focus Group Protocol

FINAL

Hi everyone. My name is _____ and I will be facilitating today's group. This is _____ and he/she will be taking notes and may jump in with any additional questions throughout the group. We're working with _____ to better understand your experiences in your community.

First, we want to thank you for agreeing to be a part of this discussion, which will last about 1-2 hours. Sonoma County healthcare workers really want to improve the health of your community, and many of those people are sitting at the table together to think about the best ways to do this. The information we gather today will be used as part of a collaborative needs assessment that will help many hospitals, Sonoma County Health Services, and Health Action to work together to determine what they can do to improve health in Sonoma County. Additionally, as a part of the Affordable Care Act, the federal government requires nonprofit hospitals to conduct a community health needs assessments every three years, and to use the results of these assessments to implement plans to improve community health. This assessment will also fulfill this requirement for these hospitals.

When we talk about health today, we are referring to a broad definition of health that includes all of the things that influence how you live and how healthy you and your family are, including access to medical services, economic conditions, safety in your community, and housing.

In this health needs assessment, we want to be sure to bring in voices that are not always represented. One of the reasons we are having this focus group is because we are really interested in the needs of residents in this neighborhood. Please keep this lens in mind as we talk about your experience in your community.

Before we begin, I'd like to talk about a few guidelines for our discussion.

- There are no right or wrong answers.
- Every opinion counts. We will respect other's opinions. It is perfectly fine to have a different opinion than others in the group, and you are encouraged to share your opinion even if it is different.
- Everyone should have an equal chance to speak. Please speak one at a time and do not interrupt anyone else.
- Do not hesitate to ask questions if you are not sure what we mean by something.
- Because we have a limited amount of time and a lot to discuss, I may need to interrupt you to give everyone a chance to speak, or to get to all the questions.
- What's said here, stays here. Everything we discuss today is completely confidential. We will summarize what the group had to say, but will not tell anyone who said what. Your names will never be mentioned. We also ask that you not repeat what is said here outside this room.
- We'd also like to record our conversation. Our note taker will be taking notes so that we remember what people had to say, but we'd also like to record the conversation to ensure we have the most accurate information possible. Is that okay?

How do these guidelines sound to everyone? Do you have any questions before we begin?

Introductions/Background

- 1) Let's start by introducing ourselves. Please tell us very briefly your first name, the town/city you live in, and one thing that you are proud of about your community.

Quality of life in community

- 2) Briefly, please describe what it is like to live in your community.
- 3) Health Action has stated that they would like Sonoma County to be the healthiest county in California by 2020. What do you think it would take for you, your family, and the people you know to be the healthiest that they could be?

- 4) From your perspective, what are the biggest health issues in your community?

4a. Of the health issues you've mentioned, which would you say are the most important or urgent to address? Why?

- 5) What do you think are some of the biggest reasons why these health issues occur in your community?

- 5) From your perspective, what health services are lacking for you and the people you know in your community?

- 5b) From your perspective, what health services are difficult to access for you and the people you know in your community?

- Follow up: What other challenges keep individuals from seeking help?

- 6) Has the Affordable Care Act [may also be known as Covered California, Obamacare] had any impact on you or the people you know in your community?

Community Assets, Barriers, and Gaps

7) Outside of healthcare, what resources exist in your community to help you and the people you know to live healthy lives?

7a) What are the barriers to accessing these resources?

7b) What resources are missing?

What is needed to improve health?

8) What do you think is [or who is] needed to improve your health or the health of the people you know in your community?

9) Is there anything else you would like to share with our team about the health of your community [that hasn't already been addressed]?

Please make sure to fill out the quick survey before you leave!
Thank you so much for your time!

Focus Group Demographic Survey FINAL

Thank you for participating in today's discussion group. We would like to ask you a few questions to understand who attended our groups. This survey is VOLUNTARY which means that do not have to participate. It is anonymous- your answers will not be tied to your name or any other personal information and we will report answers of the group as a whole.

1. What race/ethnicity do you identify as? (Please select all that apply.)

- | | |
|---|---|
| <input type="checkbox"/> Black/African American | <input type="checkbox"/> Asian (if checked, please select a choice below): |
| <input type="checkbox"/> White/Caucasian | <input type="radio"/> Cambodian <input type="radio"/> Chinese <input type="radio"/> Korean |
| <input type="checkbox"/> Hispanic/Latino | <input type="radio"/> Hmong <input type="radio"/> Pakistani <input type="radio"/> Laotian |
| <input type="checkbox"/> Native American | <input type="radio"/> Vietnamese <input type="radio"/> Japanese <input type="radio"/> East Indian |
| | <input type="radio"/> Filipino <input type="radio"/> Thai <input type="radio"/> Native Hawaiian or Pacific Islander |
| | <input type="radio"/> Other: _____ |

2. What is your current gender identity? (Check one that best describes your current gender identity.)

- | | | |
|---|--------------------------------------|---|
| <input type="checkbox"/> Male | <input type="checkbox"/> Female | <input type="checkbox"/> Genderqueer / Gender non-conforming |
| <input type="checkbox"/> Trans man | <input type="checkbox"/> Trans woman | <input type="checkbox"/> Another gender identity (Fill in the blank.) |
| <input type="checkbox"/> Declined to answer | | _____ |

3. Do you identify as a person with chronic conditions, or a leader or representative of individuals with chronic conditions?

- ☐ Yes ☐ No ☐ Declined to answer

4. What is your age group?

- | | |
|--------------------------------|--------------------------------|
| <input type="checkbox"/> 14-24 | <input type="checkbox"/> 45-54 |
| <input type="checkbox"/> 25-34 | <input type="checkbox"/> 54-60 |
| <input type="checkbox"/> 35-44 | <input type="checkbox"/> 60+ |

- | | |
|---|---|
| <input type="checkbox"/> \$10,000 to \$14,999 | <input type="checkbox"/> \$55,000 to \$64,999 |
| <input type="checkbox"/> \$15,000 to \$19,999 | <input type="checkbox"/> \$65,000 to \$74,999 |
| <input type="checkbox"/> \$20,000 to \$24,999 | <input type="checkbox"/> \$75,000 to \$99,999 |
| <input type="checkbox"/> \$25,000 to \$34,999 | <input type="checkbox"/> \$100,000 and Over |

5. What would you estimate your monthly household income is?

- | | |
|---|---|
| <input type="checkbox"/> \$0 to \$4,999 | <input type="checkbox"/> \$35,000 to \$44,999 |
| <input type="checkbox"/> \$5,000 to \$9,999 | <input type="checkbox"/> \$45,000 to \$54,999 |

6. How many people, including you, live in your house (this includes everyone related to each other by blood, marriage or a marriage-like relationship including partners and foster children)?

Thank you for completing this survey!

FOR ADMINISTRATIVE PURPOSES ONLY

Group Location: _____

Survey ID: _____

Today's Date: ____ / ____ / ____

Sonoma County Community Health Needs Assessment

Appendix E. Prioritization Scoring Matrix

Instructions: For each health need, write down a score between 1 to 7 for each criterion (1 being the lowest and 7 being the highest score possible). For example, if an issue is nearly impossible to prevent, it could be assigned a 1 in "Prevention" but may receive a score of 6 in "Severity". You will then use the clickers to indicate your score for each health need and criterion. Once everyone scores each health need, the scores will be averaged and multiplied by the weighting value to determine an overall score for each health need.

Health Need	Severity	Disparities	Prevention	Leverage
	The health need has serious consequences (morbidity, mortality, and/or economic burden) for those affected.	The health need disproportionately impacts specific geographic, age, or racial/ethnic subpopulations	Effective and feasible prevention is possible. There is an opportunity to intervene at the prevention level and impact overall health outcomes.	Solution could impact multiple problems. Addressing this issue would impact multiple health issues.
Weighting	1	1.5	1.5	1
Access to Health Care				
Access to Education				
Economic and Housing Insecurity				
Mental Health				
Substance Abuse				
Violence and Unintentional Injury				
Early Childhood Development				
Obesity and Diabetes				
Oral Health				