



# 2016 Community Health Needs Assessment

Kaiser Foundation Hospital—Santa Rosa  
License # 11000213

Approved by KFH Board of Directors  
September 21, 2016

To provide feedback about this Community Health Needs Assessment, email [CHNA-communications@kp.org](mailto:CHNA-communications@kp.org)

**KAISER PERMANENTE NORTHERN CALIFORNIA REGION  
COMMUNITY BENEFIT  
CHNA REPORT FOR KFH—SANTA ROSA**

**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**

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- 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)

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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 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 (CHNA) and develop an implementation strategy (IS) every three years (<http://www.gpo.gov/fdsys/pkg/FR-2014-12-31/pdf/2014-30525.pdf>).

While Kaiser Permanente has conducted CHNAs for many years to identify needs and resources in our communities and to guide our Community Benefit plans, these new requirements have provided an opportunity to revisit our needs assessment and strategic planning processes with an eye toward enhancing compliance and transparency and leveraging emerging technologies. The CHNA process undertaken in 2016 and described in this report was conducted in compliance with current federal requirements.

### **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.<sup>1</sup>

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 include 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.<sup>2</sup> 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.<sup>3</sup> 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, Asian, 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.<sup>4</sup> 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.<sup>5</sup> Only 55.0% of English Language Learners passed in Mathematics, compared to 87.0% of all Sonoma County tenth graders.<sup>6</sup> 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.<sup>7</sup> 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.

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<sup>1</sup> 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.

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

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

<sup>4</sup> US Census Bureau, American Community Survey, 2009-13.

<sup>5</sup> California Department of Education, 2013-14.

<sup>6</sup> California Department of Education, 2013-14.

<sup>7</sup> US Census Bureau, American Community Survey, 2014.

- 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.<sup>8</sup> Among adults 65 years and older, 51.8% do not have dental insurance coverage.<sup>9</sup> Among adults, 9.2% have poor dental health.<sup>10</sup> In 2014, 51% of kindergarteners and 3rd graders had tooth decay.<sup>11</sup> 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.<sup>12</sup> 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.<sup>13</sup> Depression is also a concern, as 31.3% of youth<sup>14</sup> and 14.1% of Medicare beneficiaries<sup>15</sup> 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.<sup>16</sup> Overweight and obesity are strongly related to stroke, heart disease, some cancers, and Type 2 diabetes.

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<sup>8</sup> Sonoma County Local Health Department File, California Health Interview Survey, 2013-14.

<sup>9</sup> Ibid.

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

<sup>11</sup> Sonoma County Smile Survey, 2014.

<sup>12</sup> US Census Bureau, American Community Survey, 2014.

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

<sup>14</sup> California Healthy Kids Survey, 2011-13.

<sup>15</sup> Centers for Medicare and Medicaid Services, 2012.

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

In Sonoma County, an estimated 25.4% of adults are obese,<sup>17</sup> and 37.9% are overweight.<sup>18</sup> Among youth, 17.5% are obese and 20.0% are overweight.<sup>19</sup> 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.<sup>20</sup>

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.<sup>21</sup> Youth were noted as a high risk population, and data indicates that in the prior 30 days 13.8% of 11<sup>th</sup> grade students reported using cigarettes, and 28.0% reported using marijuana.<sup>22</sup> Additionally, 24.4% of 11<sup>th</sup> grade students reported ever having driven after drinking.<sup>23</sup>

- 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.<sup>24</sup> 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.<sup>25</sup>

### 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:

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<sup>17</sup> California Health Interview Survey, 2014.

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

<sup>19</sup> California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-14.

<sup>20</sup> <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>

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

<sup>22</sup> California Healthy Kids Survey, 2011-13.

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

<sup>24</sup> California Health Interview Survey, 2009.

<sup>25</sup> 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.

- 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
- 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. The results will be used to drive development of strategies to address identified health needs throughout the county. Additionally, 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.

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

## **II. INTRODUCTION/BACKGROUND**

### **A. About Kaiser Permanente (KP)**

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. We 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 our beginnings, we 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 we serve more than 10 million members in nine states and the District of Columbia. Our mission is to provide high-quality, affordable health care services and to improve the health of our 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. Our 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 our members and the communities we serve. We believe good health is a fundamental right shared by all and we 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 we call Total Community Health, requires equity and social and economic well-being.

Like our approach to medicine, our work in the community takes a prevention-focused, evidence-based approach. We go beyond traditional corporate philanthropy or grantmaking to pair financial resources with medical research, physician expertise, and clinical practices. Historically, we've focused our investments in three areas—Health Access, Healthy Communities, and Health Knowledge—to address critical health issues in our communities.

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

### **C. Purpose of the Community Health Needs Assessment (CHNA) 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 (CHNA) 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 Kaiser Foundation Hospital facility are available publicly at [kp.org/chna](http://kp.org/chna).

### **D. Kaiser Permanente's Approach to Community Health Needs Assessment**

Kaiser Permanente has conducted CHNAs for many years, often as part of long standing community collaboratives. 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 transparent, rigorous, and whenever possible, collaborative approach to understanding the needs and assets in our communities. From data collection and analysis to the identification of prioritized needs and the development of an implementation strategy, the intent was to develop a rigorous process that would yield meaningful results.

Kaiser Permanente's innovative approach to CHNAs includes the development of a 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 CHNA data platform, and in some cases other local sources, each KFH facility, individually or with a collaborative, collected primary data through key informant interviews, focus groups, and surveys. Primary data collection consisted of reaching out to local public 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.

Each hospital/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.

KFH—Santa Rosa, along with The Sonoma County Department of Health Services (DHS), 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.

The SC CHNA Collaborative recognizes 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.<sup>26</sup> 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.

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<sup>26</sup> 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>.

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

In conjunction with this report, KFH—Santa Rosa will develop an implementation strategy for the priority health needs the hospital will address. These strategies will build on Kaiser Permanente’s assets and resources, as well as 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 they are finalized, will be posted publicly on our website, [www.kp.org/chna](http://www.kp.org/chna).

### III. COMMUNITY SERVED

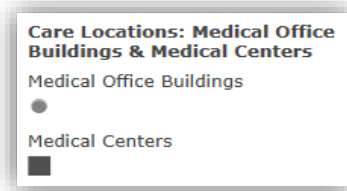
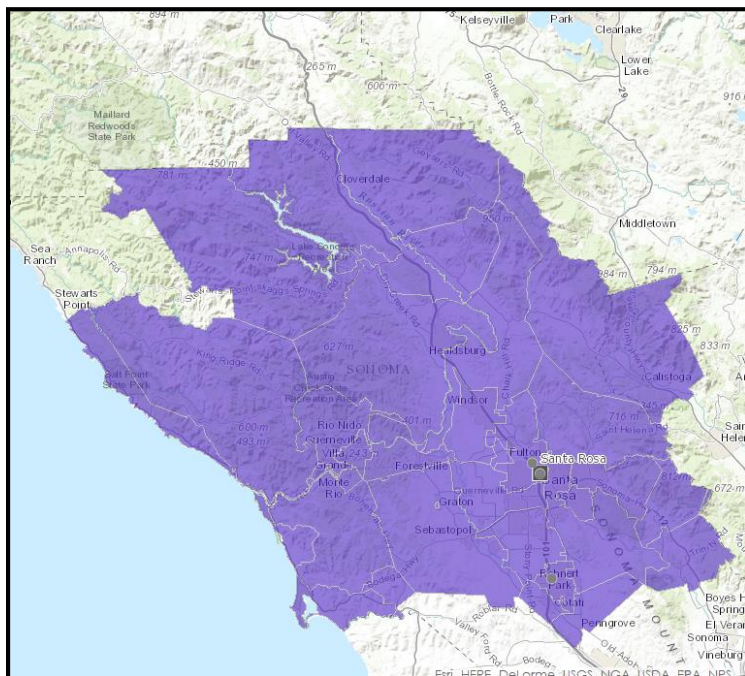
Kaiser Permanente defines the community served by a hospital as those individuals residing within its hospital service area. A hospital service area includes all residents in a defined geographic area surrounding the hospital and does not exclude low-income or underserved populations.

#### 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

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 this service area. No notable differences in health status exist, so for the purpose of this assessment a KFH—Santa Rosa considers 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.

| Demographic Data                  |         |
|-----------------------------------|---------|
| Total Population                  | 387,220 |
| White                             | 77.97%  |
| Black                             | 1.78%   |
| Asian                             | 4.09%   |
| Native American/ Alaskan Native   | 1.36%   |
| Pacific Islander/ Native Hawaiian | 0.45%   |
| Some Other Race                   | 9.96%   |
| Multiple Races                    | 4.39%   |
| Hispanic/Latino                   | 25.83%  |

| Socio-economic Data                           |        |
|---|--------|
| Living in Poverty (<200% FPL)                 | 30.73% |
| Children in Poverty <sup>27</sup> (<100% FPL) | 15.1%  |
| Unemployed <sup>28</sup>                      | 6.3%   |
| Uninsured                                     | 13.47% |
| No High School Diploma <sup>29</sup>          | 13.5%  |

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.

<sup>27</sup> US Census Bureau, 2014 American Community Survey 1-Year Estimate.

<sup>28</sup> US Department of Labor, Bureau of Labor Statistics, June 2015.

<sup>29</sup> US Census Bureau, 2010-2014 American Community Survey 5-Year Estimate.

| Sonoma County and California Health Profile Data <sup>30</sup>             |               |             |                                 |
|--|---------------|-------------|---------------------------------|
| Indicator  | Sonoma County | California  | HP 2020 Benchmark <sup>31</sup> |
| <i>Overall Health</i>  |               |             |                                 |
| Diabetes Prevalence (Age-Adjusted) <sup>32</sup>                           | 6.0%          | 8.1%        | —                               |
| Adult Asthma Prevalence <sup>33</sup>                                      | 19.8%         | 14.2%       | —                               |
| Adult Heart Disease Prevalence <sup>34</sup>                               | 7.6%          | 6.3%        | —                               |
| Poor Mental Health <sup>35</sup>   | 15.2%         | 15.9%       | —                               |
| Adults with Self-Reported Poor or Fair Health (Age-Adjusted) <sup>36</sup> | 22.0%         | 18.4%       | —                               |
| Adult Obesity Prevalence (BMI > 30) <sup>37</sup>                          | 25.4%         | 27.0%       | ≤ 30.5%                         |
| Child Obesity Prevalence (Grades 5, 7, 9) (BMI>30) <sup>38</sup>           | 17.5%         | 19.0%       | ≤ 16.1%                         |
| Adults with a Disability <sup>39</sup>                                     | 29.6%         | 28.5%       | —                               |
| Infant Mortality Rate (per 1,000 births) <sup>40</sup>                     | 4.2           | 5.0         | ≤ 6.0                           |
| All-Cancer Mortality Rate (Age-Adjusted) (per 100,000 pop.) <sup>41</sup>  | 159.1         | 151.0       | ≤ 161.4                         |
| <i>Climate and Physical Environment</i>                                    |               |             |                                 |
| Days Exceeding Particulate Matter 2.5 (Pop. Adjusted) <sup>42</sup>        | 5.6%          | 4.2%        | —                               |
| Days Exceeding Ozone Standards (Pop. Adjusted) <sup>43</sup>               | 0.0%          | 2.5%        | —                               |
| Weeks in Drought <sup>44</sup>   | 92.7%         | 92.8%       | —                               |
| Total Road Network Density (Road Miles per Acre) <sup>45</sup>             | 1.9           | 4.3         | —                               |
| Pounds of Pesticides Applied <sup>46</sup>                                 | 2,172,032     | 193,597,806 | —                               |
| Population within Half Mile of Public Transit <sup>47</sup>                | 12.1%         | 15.5%       | —                               |

#### IV. WHO WAS INVOLVED IN THE ASSESSMENT

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. Identity of Hospitals that Collaborated on the Assessment

Sonoma County’s primary hospitals (KFH—Santa Rosa, St. Joseph Health—Sonoma County, Sutter Health) worked in collaboration with partners from Sonoma County District Hospitals,

<sup>30</sup> Unless noted otherwise, all data presented in this table is from the US Census Bureau, 2009-2013 American Community Survey 5-Year Estimate.  
<sup>31</sup> 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.  
<sup>32</sup> Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2012.  
<sup>33</sup> Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional analysis by CARES, 2011-2012.  
<sup>34</sup> California Health Interview Survey, 2011-2012.  
<sup>35</sup> 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.  
<sup>36</sup> 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.  
<sup>37</sup> Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2012.  
<sup>38</sup> California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-2014.  
<sup>39</sup> California Health Interview Survey, 2014.  
<sup>40</sup> 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.  
<sup>41</sup> California Department of Public Health, 2011-13.  
<sup>42</sup> Centers for Disease Control and Prevention, National Environmental Public Health Tracking Network, 2008.  
<sup>43</sup> Centers for Disease Control and Prevention, National Environmental Public Health Tracking Network, 2008.  
<sup>44</sup> US Drought Monitor, 2012-2014.  
<sup>45</sup> Environmental Protection Agency, EPA Smart Location Database, 2011.  
<sup>46</sup> California Department of Pesticide Regulation (CDPR), 2013.  
<sup>47</sup> Environmental Protection Agency, EPA Smart Location Database, 2011.

including Healdsburg Health District, Palm Drive Health Care District, and Sonoma Valley Hospital, to complete a county-wide CHNA.

## **B. Other Partner Organizations That Collaborated on the Assessment**

Representatives from the primary hospitals, joined by representatives from Sonoma County Department of Health Services, formed the 2016 Sonoma County Community Health Needs Assessment Collaborative.

## **C. 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.

## **V. 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](http://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**

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**

Kaiser Permanente provided the public an opportunity to submit written comments on the facility's previous CHNA Report through [CHNA-communications@kp.org](mailto:CHNA-communications@kp.org). 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, KFH—Santa Rosa had not received written comments about previous CHNA Reports. Kaiser Permanente 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.

## VI. 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   |
|----------------------------|--|
| <b>Access to Care</b>      | Data related to health insurance, care access, and preventative care utilization for physical, mental, and oral health |
| <b>Access to Housing</b>   | Data related to cost, quality, availability, and access to housing   |
| <b>Access to Education</b> | Data related to educational attainment and academic success, from preschool through post-secondary education           |
| <b>Asthma and COPD</b>     | Known drivers of asthma and other respiratory diseases, and health outcomes related to these conditions                |
| <b>Cancers</b>             | Known drivers of cancers, and health outcomes related to cancers   |
| <b>Climate and Health</b>  | Data related to climate and environment, and related health outcomes   |
| <b>CVD and Stroke</b>      | Known drivers of heart disease and stroke, and related cardiovascular health outcomes                                  |

|   |   |
|---|---|
| <b>Early Child Development</b>                | 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 |
| <b>Economic Security</b>                      | Data related to economic well-being, food insecurity, and drivers of poverty including educational attainment   |
| <b>HIV/AIDS/STD</b>                           | Known drivers of sexually transmitted infections including HIV, and related STD and AIDS outcomes   |
| <b>Mental Health</b>                          | Data related to mental health and well-being, access to and utilization of mental health care, and mental health outcomes   |
| <b>Obesity and Diabetes</b>                   | Data related to healthy eating and food access, physical fitness and active living, overweight/obesity prevalence, and downstream health outcomes including diabetes                      |
| <b>Oral Health</b>                            | Data related to access to oral health care, utilization of oral health preventative services, and oral health disease prevalence  |
| <b>Overall Health</b>                         | Data related to overall community health including self-rated health and all-cause mortality  |
| <b>Pregnancy and Birth Outcomes</b>           | Data related to behaviors, care, and outcomes occurring during gestation, birth, and infancy; includes health status of both mother and infant  |
| <b>Substance Abuse and Tobacco</b>            | Data related to all forms of substance abuse including alcohol, marijuana, tobacco, illegal drugs, and prescription drugs   |
| <b>Vaccine-Preventable Infectious Disease</b> | Data related to vaccination rates and prevalence of vaccine-preventable disease   |
| <b>Violence and Injury</b>                    | Data related to intended and unintended injury such as violent crime, motor vehicle accidents, domestic violence, and child abuse   |
| <b>Youth Growth and Development</b>           | 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 hospitals in 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 for hospitals in the county 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
- c. 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   |
|--------------------|--|
| <b>Severity</b>    | The health need has serious consequences (morbidity, mortality, and/or economic burden) for those affected.  |
| <b>Disparities</b> | The health need disproportionately impacts specific geographic, age, or racial/ethnic subpopulations.  |
| <b>Prevention</b>  | 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. |
| <b>Leverage</b>    | 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.<sup>48</sup>

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 include 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.<sup>49</sup> 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

<sup>48</sup> 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.

<sup>49</sup> A Hidden Crisis: Findings on Adverse Childhood Experiences in California, Center for Youth Wellness, 2008-13.

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.<sup>50</sup> 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, Asian, 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.<sup>51</sup> 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.<sup>52</sup> Only 55.0% of English Language Learners passed in Mathematics, compared to 87.0% of all Sonoma County tenth graders.<sup>53</sup> 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.<sup>54</sup> 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.<sup>55</sup> Among adults 65 years and older, 51.8% do not have dental insurance coverage.<sup>56</sup> Among adults, 9.2% have poor dental health.<sup>57</sup> In 2014, 51% of kindergarteners and 3rd graders had tooth decay.<sup>58</sup> 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

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<sup>50</sup> California Department of Education, Standardized Testing and Reporting (STAR) Results, 2013.

<sup>51</sup> US Census Bureau, American Community Survey, 2009-13.

<sup>52</sup> California Department of Education, 2013-14.

<sup>53</sup> California Department of Education, 2013-14.

<sup>54</sup> US Census Bureau, American Community Survey, 2014.

<sup>55</sup> Sonoma County Local Health Department File, California Health Interview Survey, 2013-14.

<sup>56</sup> Ibid.

<sup>57</sup> Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES, 2006-10.

<sup>58</sup> Sonoma County Smile Survey, 2014.

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.<sup>59</sup> 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.<sup>60</sup> Depression is also a concern, as 31.3% of youth<sup>61</sup> and 14.1% of Medicare beneficiaries<sup>62</sup> 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.<sup>63</sup> 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,<sup>64</sup> and 37.9% are overweight.<sup>65</sup> Among youth, 17.5% are obese and 20.0% are overweight.<sup>66</sup> 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.<sup>67</sup>

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.<sup>68</sup> Youth were noted as a high risk population, and data indicates that in the prior 30 days 13.8% of 11<sup>th</sup> grade students reported using cigarettes, and 28.0% reported using marijuana.<sup>69</sup> Additionally, 24.4% of 11<sup>th</sup> grade students reported ever having driven after drinking.<sup>70</sup>

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<sup>59</sup> US Census Bureau, American Community Survey, 2014.

<sup>60</sup> University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, Death Public Use Data, 2010-12.

<sup>61</sup> California Healthy Kids Survey, 2011-13.

<sup>62</sup> Centers for Medicare and Medicaid Services, 2012.

<sup>63</sup> <http://www.cdc.gov/obesity/adult/defining.html>

<sup>64</sup> California Health Interview Survey, 2014.

<sup>65</sup> Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES, 2011-12.

<sup>66</sup> California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-14.

<sup>67</sup> <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>

<sup>68</sup> Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse, 2006-12.

<sup>69</sup> California Healthy Kids Survey, 2011-13.

<sup>70</sup> California Healthy Kids Survey, 2011-13. Survey asks question about “respondent or a friend.”

- 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.<sup>71</sup> 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.<sup>72</sup>

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.

### **VII. KFH—SANTA ROSA 2013 IMPLEMENTATION STRATEGY EVALUATION OF IMPACT**

#### **A. Purpose of 2013 Implementation Strategy Evaluation of Impact**

KFH—Santa Rosa’s 2013 Implementation Strategy Report was developed to identify activities to address health needs identified in the 2013 CHNA. This section of the CHNA Report describes and

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<sup>71</sup> California Health Interview Survey, 2009.

<sup>72</sup> 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.

assesses the impact of these activities. For more information on KFH—Santa Rosa’s Implementation Strategy Report, including the health needs identified in the facility’s 2013 service area, the health needs the facility chose to address, and the process and criteria used for developing Implementation Strategies, please visit [www.kp.org/chna](http://www.kp.org/chna). For reference, the list below includes the 2013 CHNA health needs that were prioritized to be addressed by KFH—Santa Rosa in the 2013 Implementation Strategy Report.

1. Mental health
2. Substance abuse
3. Access to health care/medical homes/health care coverage
4. Socioeconomic status (income, employment, education level)
5. Healthy eating and active living (nutrition/healthy food/food access/physical activity)
6. Social supports (family and community support systems and services; connectedness)
7. Cancer
8. Heart disease

KFH—Santa Rosa is monitoring and evaluating progress to date on their 2013 Implementation Strategies for the purpose of tracking the implementation of those strategies as well as to document the impact of those strategies in addressing selected CHNA health needs. Tracking metrics for each prioritized health need include the number of grants made, the number of dollars spent, the number of people reached/served, collaborations and partnerships, and KFH in-kind resources. In addition, KFH—Santa Rosa tracks outcomes, including behavior and health outcomes, as appropriate and where available.

As of the documentation of this CHNA Report in March 2016, KFH—Santa Rosa had evaluation of impact information on activities from 2014 and 2015. While not reflected in this report, KFH—Santa Rosa will continue to monitor impact for strategies implemented in 2016.

## **B. 2013 Implementation Strategy Evaluation of Impact Overview**

In the 2013 IS process, all KFH hospital facilities planned for and drew on a broad array of resources and strategies to improve the health of our communities and vulnerable populations, such as grantmaking, in-kind resources, collaborations and partnerships, as well as several internal KFH programs including, charitable health coverage programs, future health professional training programs, and research. Based on years 2014 and 2015, an overall summary of these strategies is below, followed by tables highlighting a subset of activities used to address each prioritized health need.

- **KFH Programs:** From 2014-2015, KFH supported several health care and coverage, workforce training, and research programs to increase access to appropriate and effective health care services and address a wide range of specific community health needs, particularly impacting vulnerable populations. These programs included:
  - **Medicaid:** Medicaid is a federal and state health coverage program for families and individuals with low incomes and limited financial resources. KFH provided services for Medicaid beneficiaries, both members and non-members.
  - **Medical Financial Assistance:** The Medical Financial Assistance (MFA) program provides financial assistance for emergency and medically necessary services, medications, and supplies to patients with a demonstrated financial need. Eligibility is based on prescribed levels of income and expenses.
  - **Charitable Health Coverage:** Charitable Health Coverage (CHC) programs provide health care coverage to low-income individuals and families who have no access to public or private health coverage programs.
  - **Workforce Training:** Supporting a well-trained, culturally competent, and diverse health care workforce helps ensure access to high-quality care. This activity is also essential to making progress in the reduction of health care disparities that persist in most of our communities.



- **Research:** Deploying a wide range of research methods contributes to building general knowledge for improving health and health care services, including clinical research, health care services research, and epidemiological and translational studies on health care that are generalizable and broadly shared. Conducting high-quality health research and disseminating its findings increases awareness of the changing health needs of diverse communities, addresses health disparities, and improves effective health care delivery and health outcomes
- **Grantmaking:** For 70 years, Kaiser Permanente has shown its commitment to improving Total Community Health through a variety of grants for charitable and community-based organizations. Successful grant applicants fit within funding priorities with work that examines social determinants of health and/or addresses the elimination of health disparities and inequities. From 2014-2015, KFH-Santa Rosa awarded 145 grants totaling \$5,697,015 in service of 2013 health needs. Additionally, KFH in Northern California has funded significant contributions to the East Bay Community Foundation in the interest of funding effective long-term, strategic community benefit initiatives within the KFH-Santa Rosa service area. During 2014-2015, a portion of money managed by this foundation was used to award 33 grants totaling \$367,517 in service of 2013 health needs.
- **In-Kind Resources:** Kaiser Permanente’s commitment to Total Community Health means reaching out far beyond our membership to improve the health of our communities. Volunteerism, community service, and providing technical assistance and expertise to community partners are critical components of Kaiser Permanente’s approach to improving the health of all of our communities. From 2014-2015, KFH—Santa Rosa donated several in-kind resources in service of 2013 Implementation Strategies and health needs. An illustrative list of in-kind resources is provided in each health need section below.
- **Collaborations and Partnerships:** Kaiser Permanente has a long legacy of sharing its most valuable resources: its knowledge and talented professionals. By working together with partners (including nonprofit organizations, government entities, and academic institutions), these collaborations and partnerships can make a difference in promoting thriving communities that produce healthier, happier, more productive people. From 2014-2015, KFH—Santa Rosa engaged in several partnerships and collaborations in service of 2013 Implementation Strategies and health needs. An illustrative list of in-kind resources is provided in each health need section below.

### C. 2013 Implementation Strategy Evaluation of Impact by Health Need

| <b>PRIORITY HEALTH NEED I: ACCESS TO CARE</b>  |   |  |  |
|--|---|--|--|
| <b>Long Term Goal:</b>   |   |  |  |
| <ul style="list-style-type: none"> <li>• Increase the number of individuals who have access to and receive appropriate health care services in the KFH-Santa Rosa service area.</li> </ul>   |   |  |  |
| <b>Intermediate Goal:</b>  |   |  |  |
| <ul style="list-style-type: none"> <li>• Increase the number of low income people who enroll in or maintain health care coverage</li> <li>• Increase access to culturally competent, high-quality health care services for low-income, uninsured individuals</li> </ul>  |   |  |  |
| <b>KFH-Administered Program Highlights</b>   |   |  |  |
| <b>KFH Program Name</b>  | <b>KFH Program Description</b>  | <b>Results to Date</b>   |  |
| <b>Medicaid</b>  | Medicaid is a federal and state health coverage program for families and individuals with low incomes and limited financial resources. KFH provided services for Medicaid beneficiaries, both members and non-members.        | <ul style="list-style-type: none"> <li>• 2014: 13,999 Medi-Cal members</li> <li>• 2015: 12,099 Medi-Cal members</li> </ul>   |  |
| <b>Medical Financial Assistance (MFA)</b>  | MFA provides financial assistance for emergency and medically necessary services, medications, and supplies to patients with a demonstrated financial need. Eligibility is based on prescribed levels of income and expenses. | <ul style="list-style-type: none"> <li>• 2014: KFH - Dollars Awarded By Hospital - \$5,275,857</li> <li>• 2014: 3,764 applications approved</li> <li>• 2015: KFH - Dollars Awarded By Hospital - \$4,231,182</li> <li>• 2015: 3,486 applications approved</li> </ul> |  |
| <b>Charitable Health Coverage (CHC)</b>  | CHC programs provide health care coverage to low-income individuals and families who have no access to public or private health coverage programs.  | <ul style="list-style-type: none"> <li>• 2014: 2,825 members receiving CHC</li> <li>• 2015: 2,480 members receiving CHC</li> </ul>   |  |
| <b>Grant Highlights</b>  |   |  |  |
| <b>Summary of Impact:</b> During 2014 and 2015, there were 44 active KFH grants totaling \$1,031,435 addressing Access to Care in the KFH-Santa Rosa service area. <sup>73</sup> In addition, a portion of money managed by a donor advised fund at East Bay Community Foundation was used to award 13 grants totaling \$126,377 that address this need. These grants are denoted by asterisks (*) in the table below. |   |  |  |
| <b>Grantee</b>   | <b>Grant Amount</b>   | <b>Project Description</b>   | <b>Results to Date</b>   |
| Jewish Community Free Clinic (JCFC)  | \$40,000 over 2 years<br><br>\$20,000 in 2014 & 2015  | Since 2001, JCFC has provided free medical care to anyone in need. More than 100 active JCFC volunteers provide free health care services to the uninsured. Thousands of individuals and families benefit from this maximization of community resources.             | In the spring of 2014, a 2,800 sq ft building near downtown Santa Rosa was donated to JCFC, thus making its services more accessible to more people. 1050 clients were served by more than 100 active volunteers; including: 93 patients received 404 labs, 118 received 213 vaccines, 198 received 279 free medication, and dozens of chronically ill patients received follow-up phone |

<sup>73</sup> This total grant amount may include grant dollars that were accrued (i.e., awarded) in a prior year, although the grant dollars were paid in 2015.

|   |   |   |   |
|---|---|---|---|
|   |   |   | calls to encourage follow through on referrals made to a permanent local medical home.  |
| Redwood Community Health Coalition (RCHC) | \$415,000 over 3 years<br><br>\$15,000 in 2014<br>\$190,498.85 in 2015<br><br>This grant impacts five KFH hospital service areas in Northern California Region. | RCHC provides enrollment training and technical assistance to certified enrollment counselors (CECs) affiliated with Covered Sonoma/Healthy Kids and certification training for AmeriCorps members. Funding will be used to strengthen core infrastructure to increase access to high-quality care for underserved patients and communities served by health centers; support health centers to continually improve operational capabilities, coordination of care, and workforce development; and support the Triple Aim infrastructure and management of the health center Accountable Care Organization (ACO). | RCHC has 6,685 PHASE patients and outcomes include: <ul style="list-style-type: none"> <li>increased health coaching skills among consortia/clinic staff using a comprehensive training/coaching program; 40 people were trained and three trained as trainers</li> <li>participated in a county-wide committee with leaders from the county's major health care delivery systems to develop an approach to reduce heart attacks and strokes; all leaders agreed to base the county-wide strategy on the PHASE clinical guidelines</li> <li>worked with other delivery systems to create data sharing agreements and identify which data sets can be shared across systems</li> <li>improved parts of a learning community to share promising practices with clinics; added PHASE resources to program website</li> </ul> |
| *Operation Access (OA)                    | \$300,000 in 2015<br><br>This grant impacts 14 KFH hospital service areas in Northern California Region.  | Core support to organize OA's network of 41 medical centers and 1,400 medical professionals who donate surgical, specialty, and diagnostic services to 1,500 low-income, uninsured people residing in nine Bay Area counties.   | With 1,274 staff/physician volunteers providing more than 700 services at 14 hospitals in 2015, Kaiser Permanente is the largest health system participant. At KFH Santa Rosa a total of 74 procedures were performed on 66 low-income and uninsured patients in 2014 and 2015 by the medical volunteers.   |

**Collaboration/Partnership Highlights**

| Organization/<br>Collaborative Name | Collaborative/ Partnership Goal   | Results to Date   |
|-------------------------------------|---|---|
| Health Action                       | Sonoma County Department of Health Services convened Health Action and recruited its diverse multidisciplinary membership. The group identifies priority health and health care issues and develops recommendations for local approaches that promote community health and improve the health care delivery system. | Marin-Sonoma Senior Vice President and Area Manager serves on Health Action's steering committee.   |
| Covered Sonoma                      | Comprising more than 30 organizations with a wide range of collective experience, Covered Sonoma uses coordinated enrollment initiatives  | Covered Sonoma is directly engaged in outreach and enrollment activities. Its partner organizations have unique, trusted relationships in local communities, know what options are available, and can build |

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|  | to successfully lead outreach and enrollment efforts.   | meaningful relationships in communities where the need is greatest, meeting families wherever they are—at schools, clinics, community fairs, grocery stores, etc.  |
| Sonoma County Funders Circle   | Formed in 2014, this group of more than 15 funders works collaboratively to identify and fund programs, using a collective impact model to achieve a deeper impact in Sonoma County.  | The group created a strategic plan that includes findings from the CHNA, <i>Portrait of Sonoma County</i> , and other studies to address health, education, and wellbeing inequities among Sonoma County’s residents.  |
| Sonoma County Health Alliance (SCHA) Community Health Improvement Committee (CHIC) | SCHA was formed in 2000 with the goal of improving the health of Sonoma County through collaboration among the many health systems and providers in the county. SCHA’s Community Health Improvement Committee (CHIC), is a partnership between Saint Joseph Health Sonoma County, Sutter Medical Center, KFH-Santa Rosa, and Sonoma County Department of Health Services. | Since 2001, CHIC has collaborated to conduct the Sonoma County Community Health Needs Assessment (CHNA). Partnering with other health care, education, and social services organizations, CHIC has led many important community health improvement projects. This includes expanding access to health services, developing new resources to address obesity and oral health, supporting workforce development efforts, and working to prevent unintentional injuries, HIV/AIDS, food-borne illnesses and mortality from various diseases |

**In-Kind Resources Highlights**

| <b>Recipient</b>  | <b>Description of Contribution and Purpose/Goals</b>   |  |
|---|--|--|
| Operation Access  | In 2014 and 2015 KFH Santa Rosa participated in an Operation Access event and KP physicians and other staff volunteered a total of 911 hours to help provide medical procedures to low-income, uninsured individuals.  |  |
| Community Benefit grantees from Kaiser Permanente, Sutter, St. Joseph Health System, County of Marin and County of Sonoma | KFH-Santa Rosa partnered with health care organizations and county public health departments in Marin and Sonoma counties to help local nonprofit organizations plan, conduct, and evaluate federally mandated community health needs assessments (CHNAs). With a focus on demystifying new CHNA requirements and helping strengthen local nonprofit programs, KFH-Sonoma, Sutter Health Novato, and Marin General Hospital hosted a half-day workshop at Marin County Office of Education in October. With Sutter Health, St. Joseph Health, and Sonoma County Health and Human Services, KFH-Santa Rosa replicated the workshop in December at Rohnert Park Health Center. More than 30 CB grant recipients from all participating hospitals attended each workshop, which presented key components for using CHNA as a valuable decision-making and strategic planning tool. All attendees said that the workshops were valuable to their work and 80% strongly agreed that the training made them better prepared to participate in impact evaluation.   |  |
| Latino Health Forum   | KFH-Santa Rosa Community Benefit staff are on Latino Health Forum’s planning committee, which includes members of the three local hospitals and various county departments, along with Family Residency Program of Sutter Health. The 23rd annual forum, “The Portrait of Sonoma: A Call to Action for Latino Health,” provided information about some of the most relevant issues in the Latino population and drew approximately 350 attendees: health care professionals and administrators, community health care workers and promotores, high school and college students, teachers and school administrators, government representatives, community leaders, health care advocates, and 35 exhibitors. There were 10 workshops and three keynote speakers—Oscar Chavez, Sonoma County Human Services Dept.; Dr. George R. Flores, The California Endowment; and Dr. Francisco Gonzalez, Johns Hopkins University—who discussed the most important health and social justice issues facing Latinos. Evaluations spoke to the conference’s impact and success: 93% of attendees thought conference objectives were met; 86% said topics met participants’ needs; 95% |  |

|                            |  |
|----------------------------|--|
|                            | said the speakers were knowledgeable; 85% said the information was new to them; and 93% said the information was useful to their work or studies. Conference presentations can be found at <a href="http://www.latinohhealthforum.org">www.latinohhealthforum.org</a> .  |
| All PHASE Grantees         | <p>To increase clinical expertise in the safety net, Quality and Operations Support (QOS), a Kaiser Permanente Northern California Region TPMG (The Permanente Medical Group) department, helped develop a PHASE data collection tool. QOS staff provided expert consultation on complex clinical data issues, such as reviewing national reporting standards, defining meaningful data, and understanding data collection methodology. This included:</p> <ul style="list-style-type: none"> <li>• conducting clinical training webinars</li> <li>• wireside/webinar on PHASE clinical guidelines</li> <li>• presentation at convening on Kaiser Permanente’s approach to PHASE</li> <li>• presentation to various clinical peer groups through CHCN, SFCCC, etc.</li> <li>• individual consultation to staff at PHASE grantee organizations</li> <li>• individual consultation to Community Benefit Programs staff</li> </ul> <p>Kaiser Permanente Northern California Region’s Regional Health Education (RHE) also provided assistance to PHASE grantees:</p> <ul style="list-style-type: none"> <li>• conducted two seven-hour Motivating Change trainings (24 participants each) to enable clinical staff who implement (or will) PHASE to increase their skills with regard to enhancing patients’ internal motivations to make health behavior changes</li> </ul> <p>provided access to patient education documents related to PHASE</p> |
| Safety Net Institute (SNI) | With a goal to increase SNI’s understanding of what it means to be a data-driven organization, a presentation and discussion about Kaiser Permanente’s use and development of cascading score cards – a methodology leadership uses to track improvement in clinical, financial, operations, and HR – was shared with this longtime grantee.   |

**Impact of Regional Initiatives**

**PHASE:**

PHASE (Prevent Heart Attacks And Strokes Everyday) is a program developed by Kaiser Permanente to advance population-based, chronic care management. Using evidence-based clinical interventions and supporting lifestyle changes, PHASE enables health care providers to provide cost-effective treatment for people at greatest risk for developing coronary vascular disease. By implementing PHASE, Kaiser Permanente has reduced heart attacks and stroke-related hospital admissions among its own members by 60%. To reach more people with this life saving program, Kaiser Permanente began sharing PHASE with the safety net health care providers in 2006. KP provides grant support and technical assistance to advance the safety net’s operations and systems required to implement, sustain and spread the PHASE program. By sharing PHASE with community health providers, KP supports development of a community-wide standard of care and advances the safety net’s capacity to build robust population health management systems and to collectively reduce heart attacks and strokes across the community.

**PRIORITY HEALTH NEED II: HEALTHY EATING/ACTIVE LIVING**

**Long Term Goals:**

- Improve health and reduce chronic disease in the KFH-Santa Rosa Area through the consumption of healthful diets and the achievement and maintenance of healthy body weights

**Intermediate Goals:**

- Increase healthy eating among youth and seniors in low income communities
- Increase physical activity in community and institutional settings
- Expand policies regulating healthy/unhealthy foods and accessing physical activity

**Grant Highlights**

**Summary of Impact:** During 2014 and 2015, there were 50 active KFH grants totaling \$1,349,785 addressing Healthy Eating/Active Living in the KFH-Santa Rosa service area.<sup>74</sup> In addition, a portion of money managed by a donor advised fund at East Bay Community Foundation was used to award 9 grants totaling \$55,595 that address this need. These grants are denoted by asterisks (\*) in the table below.

| <b>Grantee</b>                                  | <b>Grant Amount</b> | <b>Project Description</b>   | <b>Results to Date</b>   |
|---|---------------------|--|--|
| Catholic Charities of the Diocese of Santa Rosa | \$20,000 in 2015    | Catholic Charities' Wellness program offers support and services to adults and children living in a family shelter to improve their health and wellness. The active living workshops offered include yoga, Zumba, walking group, running club, and boxing lessons for children.  | Catholic Charities served 250 clients as of Nov. 2015. Program results include 100% of parents reported increased knowledge of healthy nutritional choices; 73% reported that they and their children increased their healthy nutritional choices; and 78% of families said they increased their physical activity. To increase park access, Catholic Charities and Sonoma County Regional Parks piloted a program to process vehicle entry pass applications (eligibility based on income).   |
| Redwood Empire Food Bank                        | \$20,000 in 2015    | Part of the Food Bank's hunger relief initiatives, The Megan Furth Harvest Pantry (MFHP) is a mobile pantry that travels to nine communities, providing fresh fruits and vegetables to families with children 0 to 6. The goal is to prevent anemia and obesity in young children through nutrition education, physical activity promotion, and distribution of iron-rich produce. | Results included: <ul style="list-style-type: none"> <li>• By Nov 31, MFHP had distributed 258,409 lbs. of food; weekly average was 370 families and 438 children.</li> <li>• Goal to distribute a weekly average of 30 lbs. of fresh produce and food staples per family was exceeded, by more than 3 lbs.</li> <li>• 14 nutrition and healthy living/eating lessons encouraged families to eat more fruits and vegetables</li> <li>• Healthy recipe cards and cookbooks made it easier for families to increase their fruit and vegetable consumption.</li> <li>• All families received a goal card to help track participation and encourage maintenance of healthy, active habits outside of the weekly</li> </ul> |

<sup>74</sup> This total grant amount may include grant dollars that were accrued (i.e., awarded) in a prior year, although the grant dollars were paid in 2015.

|  |  |  |   |
|--|--|--|---|
|  |  |  | food distributions. Sample goals include visiting a new park or taking family walks.  |
| Old Adobe Unified School District            | \$25,000 in 2015 (even split with KFH San Rafael)        | Free daily lunches, snacks, and physical activities, including soccer, tennis, and SPARK (Sports, Play, and Active Recreation for Kids) during the district's Summer Scholars program.                   | As of Dec. 1, 2015: <ul style="list-style-type: none"> <li>• 4,124 students received free meals during summer camp (an increase from 1,279 the previous year) and 1,886 received free snacks</li> <li>• 150 youth 6 to 12 attended soccer camp</li> <li>• 85 played tennis during the school year</li> <li>• 170 took part in daily Spark activities.</li> </ul>  |
| County of Sonoma Department of Public Health | \$1,000,000 over 2 years<br><br>\$500,000 in 2014 & 2015 | HEAL Zone grant to implement coordinated, high reach and impact strategies focused on policy, systems, built environment, and program changes to support healthy eating and active living in Santa Rosa. | Expected reach is 22,026 people; expected outcomes include: <ul style="list-style-type: none"> <li>• to reduce availability and appeal of sugar-sweetened beverages, a countywide healthy beverage plan is developed</li> <li>• residents identify/implement community projects that increase healthy food access</li> <li>• South Santa Rosa's physical activity infrastructure is improved to provide greater walking and biking access</li> <li>• school wellness policies are strengthened and implemented; strategic plan to improve physical education in schools is developed</li> </ul> |

**Collaboration/Partnership Highlights**

| <b>Organization/<br/>Collaborative Name</b>        | <b>Collaborative/ Partnership Goal</b>   | <b>Results to Date</b>   |
|--|--|--|
| Community Activity and Nutrition Coalition (CAN-C) | CAN-C comprises individuals, professionals, and community-based organizations that focus on the nutritional health, activity levels, and well-being of Sonoma County residents. Active committees are CAN-C Steering, Healthy Students Initiative, Physical Activity, and C-NAP (Community Nutrition Action Plan). | KFH-Santa Rosa CB staff sit on CAN-C's Steering Committee and co-chair its Healthy Students Initiative Committee, which works to improve school wellness policies and provides support and resources for developing effective school wellness committee.                 |
| Sonoma County Food System Alliance (SCFSA)         | A diverse, county-based coalition, SCFSA works to improve the food system through collective action, community engagement, a commitment to the long-term process needed to achieve system-wide change, and leveraging partnerships and strategic opportunities.  | A KFH-Santa Rosa CB staff person is a SCFSA member. She serves as co-chair of the Healthy Eating Action Team (HEAT), which is currently advocating with local jurisdictions to adopt policies and practices to improve access to and consumption of local, healthy food. |

| <b>In-Kind Resources Highlights</b>   |  |
|---|--|
| <b>Recipient</b>  | <b>Description of Contribution and Purpose/Goals</b>   |
| Community Benefit grantees from Kaiser Permanente, Sutter, St. Joseph Health System, County of Marin and County of Sonoma | KFH-Santa Rosa partnered with health care organizations and county public health departments in Marin and Sonoma counties to help local nonprofit organizations plan, conduct, and evaluate federally mandated community health needs assessments (CHNAs). With a focus on demystifying new CHNA requirements and helping strengthen local nonprofit programs, KFH-Sonoma, Sutter Health Novato, and Marin General Hospital hosted a half-day workshop at Marin County Office of Education in October. With Sutter Health, St. Joseph Health, and Sonoma County Health and Human Services, KFH-Santa Rosa replicated the workshop in December at Rohnert Park Health Center. More than 30 CB grant recipients from all participating hospitals attended each workshop, which presented key components for using CHNA as a valuable decision-making and strategic planning tool. All attendees said that the workshops were valuable to their work and 80% strongly agreed that the training made them better prepared to participate in impact evaluation. |
| Various schools in Sonoma County  | KPET offered 33 events in 2015, including 24 performances at 19 schools, reaching 9,742 students and 765 adults.   |

**Impact of Regional Initiatives**

**HEAL Zones:**

Kaiser Permanente’s HEAL (Healthy Eating, Active Living) Zone initiative is a place-based approach that aims to lower the prevalence and risks of diseases associated with obesity in communities that have disproportionate rates of heart disease, type 2 diabetes, high blood pressure, stroke, depression, and some cancers. HEAL Zones focus on increasing access to fresh fruit, vegetables, and healthy beverages, as well as increasing safe places to be play and be physically active. HEAL Zones deploy robust coalitions of local public agencies, schools and school districts, community-based organizations, employers, local businesses, faith-based organizations, and health care providers, including Kaiser Permanente, to affect broad population-level behavior change that will ultimately lead to better health outcomes.

**PRIORITY HEALTH NEED III: ACCESS TO MENTAL HEALTH SERVICES**

**Long Term Goal:**

- Improve mental health outcomes among high-risk populations in the KFH-Santa Rosa service area.

**Intermediate Goals:**

- Improve management of mental health symptoms among high-risk populations
- Decrease risks for mental, emotional, and behavioral disorders among high-risk populations
- Improve integration of primary care and behavioral health for high-risk populations.

**Grant Highlights**

**Summary of Impact:** During 2014 and 2015, there were 31 active KFH grants totaling \$243,174 addressing Access to Mental Health Services in the KFH-Santa Rosa service area.<sup>75</sup> In addition, a portion of money managed by a donor advised fund at East Bay Community Foundation was used to award 3 grants totaling \$108,095 that address this need. These grants are denoted by asterisks (\*) in the table below.

<sup>75</sup> This total grant amount may include grant dollars that were accrued (i.e., awarded) in a prior year, although the grant dollars were paid in 2015.



| Grantee  | Grant Amount  | Project Description   | Results to Date  |
|--|---|---|--|
| Child Parent Institute (CPI)                       | \$20,000 in 2015  | CPI's Raising Successful Kids program provides school-based mental health counseling services to high-need students in six Rohnert Park elementary and middle schools.  | <ul style="list-style-type: none"> <li>• Program was initially offered in three schools; three additional schools have been added</li> <li>• In Dec, 140 participants were trained to conduct and debrief ACEs (adverse childhood experiences) surveys</li> <li>• 41 students have been assessed and are receiving therapy</li> <li>• Program is serving fewer students than anticipated because therapists and teachers have a difficult time getting parents to sign required paperwork, and the superintendent in one district left early in the school year</li> </ul> |
| Lifeworks of Sonoma County                         | \$40,000 over 2 years<br><br>\$20,000 in 2014 & 2015              | Lifeworks' El Puente (the bridge) serves youth 6 to 19 who are at risk for developing behavioral problems.  | The program served 71 youth and 119 family members. Of these, 70% of youth abstained from substance use during treatment; and 76% increased the number of days they attended school from 2.5 days to 4.5 days. At the end of the therapeutic sessions, 76% of youth and their families reported that family functioning and communication had improved.  |
| Lomi School Foundation (Lomi Psychotherapy Clinic) | \$30,000 over 2 years<br><br>\$10,000 in 2014<br>\$20,000 in 2015 | Lomi Psychotherapy Clinic provides free, evidence-based counseling services to clients who are impoverished, in crisis, and cannot afford mental health care. Lomi's Legacy program offers 10 free counseling sessions for individuals who make less than \$1,500 per month. Grant will support Lomi's sliding-scale and free programs, ensuring that the most underserved community members have access to mental health care. | 54 clients were served and experienced a reduction in depression, anxiety, trauma symptoms, and negative behaviors. Clients also reported increased self-esteem, self-care, coping skills, and healthy behaviors. Staff received training that addressed child abuse, neglect, and cultural competency to work with the latino community, including attitudes towards substance use, veteran's needs, PTSD and grief.  |
| *Santa Rosa Community Health Centers (SRCHC)       | \$95,000 in 2015  | SRCHC will increase competency of Elsie Allen High School teachers and staff to recognize/understand the impacts of trauma; increase mental health services for low-income, high-risk youth 12 to 19; and support school staff wellness with weekly yoga classes that connect them to the health center.  | <p>Expected outcomes:</p> <ul style="list-style-type: none"> <li>• 1,114 students and 94 staff reached</li> <li>• 60% of teachers/staff attend at least one trauma-informed care training</li> <li>• additional weekly onsite mental health visits for youth</li> </ul>  |

|  |  |  |   |
|--|--|--|---|
|  |  |  | <ul style="list-style-type: none"> <li>teachers/staff engage in healthy activity to reduce work stress</li> </ul> |
|--|--|--|---|

**Collaboration/Partnership Highlights**

| <b>Organization/<br/>Collaborative Name</b>     | <b>Collaborative/ Partnership Goal</b>  | <b>Results to Date</b>  |
|---|---|---|
| Sonoma County Healthy Aging Collaborative (HAC) | Connecting community sectors to improve health and quality of life for the county's older adults, HAC makes sure seniors are a respected/valued part of the community. Its goals align with those of Health Action and Upstream Investments, collaboratives that work to improve the health and well-being of all residents and support a shared vision of being California's healthiest county.  | HAC was chosen to participate in the CDC-funded National Leadership Academy for the Public's Health (NLAPH), which provided support and guidance to HAC throughout the year, developed a draft action plan, and conducted a series of focus groups throughout the county to hear from community residents.  |
| Latino Service Providers                        | LSP-SC works with community partners to engage, collaborate, and exchange valuable information; increase awareness of available resources and access to these programs and services; influence public policy and delivery of services; enhance interagency communication; and promote professional development among Latinos. Its mission is to build a healthier community by serving and strengthening Latino families and children, and reducing racial and ethnic disparities in Sonoma County. | <p>KFH Santa Rosa CB staff member serves on LSP's board of directors of. In 2015, LSP accomplished the following:</p> <ul style="list-style-type: none"> <li>Mental Health Services Act funding doubled</li> <li>LSP membership rose to 1,180 members</li> <li>Received a Gold Resolution from the Board of Supervisors</li> <li>Received an Office of Statewide Health Planning and Development grant</li> <li>Held 10th anniversary Fiesta April 29, 2015</li> <li>Received <i>North Bay Business Journal</i> recognition</li> <li>Planned and held a successful Mental Health Career symposium</li> <li>Completed yearly survey and website analytics</li> </ul> |

**In-Kind Resources Highlights**

| <b>Recipient</b>                  | <b>Description of Contribution and Purpose/Goals</b>   |
|-----------------------------------|--|
| Sonoma County Mental Health Board | KFH-Santa Rosa Public Relations Communications Manager is on the Mental Health Board of Directors, which advised Sonoma County Board of Supervisors and Behavioral Health Director to support a range of mental health programs and organizations throughout the county. |

**Impact of Regional Initiatives**

**Youth and Trauma Informed Care:**

Research has established the connection between childhood trauma and significant, long-term health issues in adulthood. Kaiser Permanente's Youth and Trauma-Informed Care (YTIC) initiative aims to cultivate trauma-informed environments in schools and community-based organizations to prioritize the relationships, trust, safety, and mindful interactions that are essential to helping youth heal from trauma and go on to lead healthy, productive lives. Grantees are supported to increase screening for trauma exposure among youth 12 to 18, provide mental health support and services onsite, strengthen referrals for long-term care, and increase awareness among teachers and staff of trauma signs and

symptoms. Teacher and staff training also addresses how to manage their own stress, burnout, and even vicarious trauma and how to minimize the risks of re-traumatizing youth.

**PRIORITY HEALTH NEED IV: DISPARITIES IN ORAL HEALTH**

**Long Term Goal:**

- Improve oral health among high-risk populations in the KFH-Santa Rosa service area

**Intermediate Goals:**

- Increase the number of children and adults receiving preventive dental services

**Grant Highlights**

**Summary of Impact:** During 2014 and 2015, there were 4 active KFH grants totaling \$43,100 addressing Disparities in Oral Health in the KFH-Santa Rosa service area.<sup>76</sup>

| <b>Grantee</b>  | <b>Grant Amount</b>   | <b>Project Description</b>   | <b>Results to Date</b>  |
|---|---|--|---|
| Community Action Partnership of Sonoma County (CAPSC) | \$37,500 over 2 years<br>\$15,000 in 2014<br>\$22,500 in 2015 | Each February, Sonoma County dentists and their dental teams, dental hygiene students, and community volunteers give low-income children 0 to 18 with no or limited coverage free oral health care services on Give Kids a Smile Day (GKAS),.  | GKAS dental clinics served more than 600 low-income children, providing dental disease preventive services and/or emergency treatment valued at more than \$200,000.  |
| PDI Surgery Center                                    | \$37,500 over 2 years<br>\$15,000 in 2014<br>\$22,500 in 2015 | PDI is Northern California's only non-profit pediatric dental surgery center focused on treating children with severe tooth decay (the nation's number one childhood health epidemic) under general anesthesia. PDI's Case Management and Oral Education program aims to reduce tooth decay among Sonoma County's low-income children by providing case management that includes prevention education, dental screenings, health insurance enrollment information, and support for families who need help traveling to the Center for their child's treatment. | PDI served 2,175 low-income parents and children with pediatric dental services and surgeries. Patients attended workshops and parents received preventive education, and 95 children received dental screenings at local health fairs. 126 people attended workshops at Graton Day Labor Center, Cali Calmecac-ELAC, John Jordan Winery, and La Luz Center, and through these workshops: 55 children received dental screenings, 890 brochures were distributed, and 60 families seeking health coverage received insurance forms. |
| *Petaluma Health Center                               | \$250,000 in 2015   | Grant helps fund a new 35,000 sq. ft. health clinic in an existing building, giving the clinic the capacity to serve twice as many low-  | Anticipated outcomes include:   |

<sup>76</sup> This total grant amount may include grant dollars that were accrued (i.e., awarded) in a prior year, although the grant dollars were paid in 2015.

|   |  | income, medically underserved Southern Sonoma County patients as it does today: from 23,000 to 46,000 patients annually.   | <ul style="list-style-type: none"> <li>• build-out and equip a 15-chair dental clinic at Rohnert Park Health Center, doubling Petaluma Health Center's dental capacity</li> <li>• build-out and equip the new health center's primary and mental health care departments</li> </ul> |
|---|--|--|---|
| County of Sonoma<br>Department of Human Services, Valley of the Moon Children's Center (VMCC) | \$20,000 in 2014   | VMCC's Dental Program serves the oral health needs of children in emergency foster care in Sonoma County. The children receive dental exams; if unmet needs are identified follow-up care is provided.       | 108 children received dental evaluations and all received a treatment plan. 86% received treatment for dental caries along with oral health education. VMCC staff reports indicate that (with staff support) 93% of the children brush at least once a day.                         |
| Collaboration/Partnership Highlights  |  |  |   |
| Organization/<br>Collaborative Name   | Collaborative/ Partnership Goal  | Results to Date  |   |
| Sonoma County Dental Health Network   | To engage in a community oral health improvement initiative.   | KFH Santa Rosa CB Manager and a KFH-Santa Rosa pediatrician served as board members to launch a county-wide initiative and education campaign. They also trained as members of the network's speaker bureau. |   |
| In-Kind Resources Highlights  |  |  |   |
| Recipient   | Description of Contribution and Purpose/Goals  |  |   |
| Sonoma County Fluoridation Committee  | KFH Santa Rosa CB Manager was on the Fluoridation Advisory Committee, which is convened by Sonoma County Department of Health Services and under the auspices of the county board of supervisors. The committee reviews multiple reports and engineering proposals, listens to public comment, gathers relevant data, provides advice on oral health fluoridation issues, and develops recommendations for consideration by the Department Fluoridation Committee. |  |   |

**PRIORITY HEALTH NEED V: BROADER HEALTH CARE SYSTEM NEEDS IN OUR COMMUNITIES – WORKFORCE**

**KFH Workforce Development Highlights**

**Long Term Goal:**

- To address health care workforce shortages and cultural and linguistic disparities in the health care workforce

**Intermediate Goal:**

- Increase the number of skilled, culturally competent, diverse professionals working in and entering the health care workforce to provide access to quality, culturally relevant care

**Summary of Impact:** During 2014 and 2015, Kaiser Foundation Hospital awarded 16 Workforce Development grants totaling \$181,014 that served the KFH-Santa Rosa service area.<sup>77</sup> In addition, a portion of money managed by a donor advised fund at East Bay Community Foundation was used to award 6 grants totaling \$46,108 that address this need. In addition, KFH San Rosa provided trainings and education for 59 residents in their Graduate Medical Education program in 2014 and 57 residents in 2014, 10 nurse practitioners or other nursing beneficiaries in 2014 and 9 in 2015, and 30 other health (non-MD) beneficiaries as well as internships for 21 high school and college students (Summer Youth, INROADS, etc) for 2014-2015.

| <b>Grant Highlights</b>   |  |   |   |
|---|--|---|---|
| <b>Grantee</b>  | <b>Grant Amount</b>  | <b>Project Description</b>  | <b>Results to Date</b>  |
| Career Technical Ed. Foundation/ Santa Rosa Junior College (SRJC)/ Sonoma County Office of Education (SCOE) | \$150,000 over 2 years<br><br>\$75,000 in 2014 & 2015  | Funding to help Health Career Academy of Sonoma County continue the year-round High School Health Pathway Program throughout the county.  | Program launched in December 2104. The program accommodated 20 students in Spring 2015 and 22 additional students participated in Santa Rosa Junior College's Summer Health Careers institute in Summer of 2015.  |
| *10,000 Degrees   | \$24,000 in 2015   | The 10,000 Degrees Institute Summer Intensive will assist 120 students at six Sonoma County high schools prepare for college. Participants take part in the Summer Intensive college experience (four days and three nights at Sonoma State University) and the year-round program during their junior and senior years.  | Anticipated outcomes include: <ul style="list-style-type: none"> <li>• expose an additional 25 high school students from diverse, low-income families to health-related college and career paths</li> <li>• establish a health/medicine college and career path Summer Intensive program</li> <li>• expose interested students to learning experiences in health- and medicine-related fields and to mentors, including local Kaiser Permanente physicians and staff</li> </ul> |
| *Stiles Hall  | \$75,000<br><br>This grant impacts all KFH hospital service areas in Northern California Region. | Stiles' Experience Berkeley Program aims to promote admission of low-income, first-generation students of color, specifically Black, Latino, and Native American high school students, to University of California Berkeley (UCB) through mentorship by UCB students and admissions officers, academic counseling, and active recruitment of underrepresented high school and community college students. | Anticipated outcomes for the 260 mentored Experience Berkeley students include: <ul style="list-style-type: none"> <li>• 100% of mentees apply for admission to UCB</li> <li>• 52% UCB admission rate for high school program participants</li> <li>• 87% UCB admission rate for community college program participants</li> <li>• 65% of those admitted from high school will attend UCB</li> </ul>  |

<sup>77</sup> This total grant amount may include grant dollars that were accrued (i.e., awarded) in a prior year, although the grant dollars were paid in 2015.

|   |   |  |   |
|---|---|--|---|
|   |   |  | <ul style="list-style-type: none"> <li>• 95% of those admitted from community college will attend UCB</li> <li>• program participants maintain an average GPA of 3.3; average GPA for students of color not enrolled in the program is 2.9)</li> </ul>  |
| *San Francisco State University (SFSU) Health Equity Initiative | \$99,211 in 2015<br><br>This grant impacts 13 KFH hospital service areas in Northern California Region. | SFSU's Metro College Success, a school within a school, has increased graduation rates of low-income, underrepresented and/ or first-generation students by redesigning the first two years of college. Initiative will develop new health equity and career readiness content for the Metro Health Academy curriculum to diversify the health care workforce in the 10-county Bay region. | Anticipated outcomes include: <ul style="list-style-type: none"> <li>• design/implement new curricula for three core courses (health equity, social determinants of health, and history of health) for 350 Metro Health Academy students</li> <li>• develop/disseminate video modules to train Metro faculty in the new curricula</li> <li>• develop a webpage to share curricula with faculty from other institutions in the region</li> </ul> |

**PRIORITY HEALTH NEED V: BROADER HEALTH CARE SYSTEM NEEDS IN OUR COMMUNITIES – RESEARCH**

**KFH Research Highlights**

**Long Term Goal:**

- To increase awareness of the changing health needs of diverse communities

**Intermediate Goal:**

- Increase access to, and the availability of, relevant public health and clinical care data and research

**Grant Highlights**

| <b>Grantee</b>                         | <b>Grant Amount</b>  | <b>Project Description</b>  | <b>Results to Date</b>   |
|--|--|---|--|
| UCLA Center for Health Policy Research | \$2,100,000 over 4 years<br><br>1,158,200 over 2014 & 2015<br><br>This grant impacts all KFH hospital service areas in Northern California Region. | Grant funding during 2014 and 2015 has supported The California Health Interview Survey (CHIS), a survey that investigates key public health and health care policy issues, including health insurance coverage and access to health services, chronic health conditions and their prevention and management, the health of children, working age adults, and the elderly, health care reform, and cost effectiveness of health services delivery models. In addition, funding allowed CHIS | CHIS 2013-2014 was able to collect data and develop files for 48,000 households, adding Tagalog as a language option for the survey this round. In addition 10 online AskCHIS workshops were held for 200 participants across the state. As of February 2016, progress on the 2015-2016 survey included completion of the CHIS 2015 data collection that achieved the adult target of 20,890 completed interviews. CHIS 2016 data collection began on January 4, 2016 and is scheduled to end in December 2016 |

|  |  |  |  |
|--|--|--|--|
|  |  | <p>to support enhancements for AskCHIS Neighborhood Edition (NE). New AskCHIS NE visualization and mapping tools will be used to demonstrate the geographic differences in health and health-related outcomes across multiple local geographic levels, allowing users to visualize the data at a sub-county level.</p> | <p>with a target of 20,000 completed adult interviews.</p> <p>In addition, funding has supported the AskCHIS NE tool which has allowed the Center to:</p> <ul style="list-style-type: none"> <li>• Enhance in-house programming capacity for revising and using state-of-the-science small area estimate (SAE) methodology.</li> <li>• Develop and deploy AskCHIS NE.</li> <li>• Launch and market AskCHIS NE.</li> <li>• Monitor use, record user feedback, and make adjustments to AskCHIS NE as necessary.</li> </ul> |
|--|--|--|--|

In addition to the CHIS grants, two research programs in the Kaiser Permanente Northern California Region Community Benefit portfolio – the Division of Research (DOR) and Northern California Nursing Research (NCNR) – also conduct activities that benefit all Northern California KFH hospitals and the communities they serve.

DOR conducts, publishes, and disseminates high-quality research to improve the health and medical care of Kaiser Permanente members and the communities we serve. Through interviews, automated data, electronic health records (EHR), and clinical examinations, DOR conducts research among Kaiser Permanente’s 3.9 million members in Northern California. DOR researchers have contributed over 3,000 papers to the medical and public health literature. Its research projects encompass epidemiologic and health services studies as well as clinical trials and program evaluations. Primary audiences for DOR’s research include clinicians, program leaders, practice and policy experts, other health plans, community clinics, public health departments, scientists and the public at large. Community Benefit supports the following DOR projects:

| DOR Projects  | Project Information   |
|---|---|
| Central Research Committee (CRC)                          | Information on recent CRC studies can be found at: <a href="http://insidedorprod2.kp-dor.kaiser.org/sites/crc/Pages/projects.aspx">http://insidedorprod2.kp-dor.kaiser.org/sites/crc/Pages/projects.aspx</a>  |
| Clinical Research Unit (CCRU)                             | CCRU offers consultation, direction, support, and operational oversight to Kaiser Permanente Northern California clinician researchers on planning for and conducting clinical trials and other types of clinical research; and provides administrative leadership, training, and operational support to more than 40 regional clinical research coordinators. CCRU statistics include more than 420 clinical trials and more than 370 FDA-regulated clinical trials. In 2015, the CCRU expanded access to clinical trials at all 21 KPNC medical centers.  |
| Research Program on Genes, Environment and Health (RPGEH) | RPGEH is working to develop a research resource linking the EHRs, collected bio-specimens, and questionnaire data of participating KPNC members to enable large-scale research on genetic and environmental influences on health and disease; and to utilize the resource to conduct and publish research that contributes new knowledge with the potential to improve the health of our members and communities. By the end of 2014, RPGEH had enrolled and collected specimens from more than 200,000 adult KPNC members, had received completed health and behavior questionnaires from more than 430,000 members; and had genotyped DNA samples from more than 100,000 participants, linked the genetic data with EHRs and survey data, and made it available to more than 30 research projects |

A complete list of DOR's 2015 research projects is at <http://www.dor.kaiser.org/external/dorexternal/research/studies.aspx>. Here are a few highlights:

| Research Project Title   | Alignment with CB Priorities                      |
|--|---|
| Risk of Cancer among Asian Americans (2014)  | Research and Scholarly Activity                   |
| Racial and Ethnic Disparities in Breastfeeding and Child Overweight and Obesity (2014)   | Healthy Eating, Active Living                     |
| Transition from Healthy Families to Medi-Cal: The Behavioral Health Carve-Out and Implications for Disparities in Care (2014)  | Access to Care<br>Mental/Behavioral Health        |
| Health Impact of Matching Latino Patients with Spanish-Speaking Primary Care Providers (2014)  | Access to Care                                    |
| <i>Predictors of Patient Engagement in Lifestyle Programs for Diabetes Prevention</i> – Susan Brown  | Access to care                                    |
| <i>Racial Disparities in Ischemic Stroke and Atherosclerotic Risk Factors in the Young</i> – Steven Sidney   | Access to care                                    |
| <i>Impact of the Affordable Care Act on prenatal care utilization and perinatal outcomes</i> – Monique Hedderson   | Access to care                                    |
| <i>Engaging At-Risk Minority Women in Health System Diabetes Prevention Programs</i> – Susan Brown   | HEAL  |
| <i>The Impact of the Affordable Care Act on Tobacco Cessation Medication Utilization</i> – Kelly Young-Wolff   | HEAL  |
| <i>Prescription Opioid Management in Chronic Pain Patients: A Patient-Centered Activation Intervention</i> – Cynthia Campbell  | Mental/Behavioral Health                          |
| <i>Integrating Addiction Research in Health Systems: The Addiction Research Network</i> – Cynthia Campbell   | Mental/Behavioral Health                          |
| RPGEH Project Title  | Alignment with CB Priorities                      |
| Prostate Cancer in African-American Men (2014)   | Access to Care<br>Research and Scholarly Activity |
| RPGEH high performance computing cluster. DOR has developed an analytic pipeline to facilitate genetic analyses of the GERA (Genetic Epidemiology Research in Adult Health and Aging) cohort data. Development of the genotypic database is ongoing; in 2014, additional imputed data were added for identification of HLA serotypes. (2014) | Research and Scholarly Activity                   |

The main audience for NCNR-supported research is Kaiser Permanente and non-Kaiser Permanente health care professionals (nurses, physicians, allied health professionals), community-based organizations, and the community-at-large. Findings are available at the Nursing Pathways NCNR website: <https://nursingpathways.kp.org/ncal/research/index.html>.

| Alignment with CB Priorities  | Project Title   | Principal Investigator  |
|---|---|---|
| Serve low-income, underrepresented, vulnerable populations located in the Northern California Region service area | <ol style="list-style-type: none"> <li>1. <i>A qualitative study: African American grandparents raising their grandchildren: A service gap analysis.</i></li> <li>2. <i>Feasibility, acceptability, and effectiveness of Pilates exercise on the Cadillac exercise machine as a therapeutic intervention for chronic low back pain and disability.</i></li> </ol> | <ol style="list-style-type: none"> <li>1. Schola Matovu, staff RN and nursing PhD student, UCSF School of Nursing</li> <li>2. Dana Stieglitz, Employee Health, KFH-Roseville; faculty, Samuel Merritt University</li> </ol> |



|  |   |  |
|--|---|--|
| <p>Reduce health disparities.</p>                                | <ol style="list-style-type: none"> <li>1. <i>Making sense of dementia: exploring the use of the markers of assimilation of problematic experiences in dementia scale to understand how couples process a diagnosis of dementia.</i></li> <li>2. <i>MIDAS data on elder abuse reporting in KP NCAL.</i></li> <li>3. <i>Quality Improvement project to improve patient satisfaction with pain management: Using human-centered design.</i></li> <li>4. <i>Transforming health care through improving care transitions: A duty to embrace.</i></li> <li>5. <i>New trends in global childhood mortality rates.</i></li> </ol>   | <ol style="list-style-type: none"> <li>1. Kathryn Snow, neuroscience clinical nurse specialist, KFH-Redwood City</li> <li>2. Jennifer Burroughs, Skilled Nursing Facility, Oakland CA</li> <li>3. Tracy Trail-Mahan, et al., KFH-Santa Clara</li> <li>4. Michelle Camicia, KFH-Vallejo Rehabilitation Center</li> <li>5. Deborah McBride, KFH-Oakland</li> </ol>   |
| <p>Promote equity in health care and the health professions.</p> | <ol style="list-style-type: none"> <li>1. <i>Family needs at the bedside.</i></li> <li>2. <i>Grounded theory qualitative study to answer the question, "What behaviors and environmental factors contribute to emergency department nurse job fatigue/burnout and how pervasive is it?"</i></li> <li>3. <i>A new era of nursing in Indonesia and a vision for developing the role of the clinical nurse specialist.</i></li> <li>4. <i>Electronic and social media: The legal and ethical issues for health care.</i></li> <li>5. <i>Academic practice partnerships for unemployed new graduates in California.</i></li> <li>6. <i>Over half of U.S. infants sleep in potentially hazardous bedding.</i></li> </ol> | <ol style="list-style-type: none"> <li>1. Mchelle Camicia, director operations KFH-Vallejo Rehabilitation Center</li> <li>2. Brian E. Thomas, Informatics manager, doctorate student, KP-San Jose ED.</li> <li>3. Elizabeth Scruth, critical care/sepsis clinical practice consultant, Clinical Effectiveness Team, NCAL</li> <li>4. Elizabeth Scruth, et al.</li> <li>5. Van et al.</li> <li>6. Deborah McBride, KFH-Oakland</li> </ol> |

**VIII. 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**



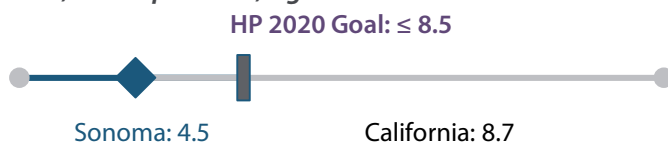
# Early Child Development

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.<sup>1</sup> Adverse Childhood Experiences (ACEs)<sup>†</sup> 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.<sup>2</sup> 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 Maltreatment<sup>3</sup> Per 1,000 Population; Age 0-17



#### Percent of Adults That Have Experienced 4+ Adverse Childhood Experiences (ACEs) Before Age 18<sup>4</sup>



“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.<sup>2</sup> 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 Line<sup>5</sup>

**12.8** | **22.7**  
Sonoma | California

#### Exposure to Food Insecurity, Youth

% of children <18 living in households with limited or uncertain access to adequate food<sup>6</sup>

**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 cares<sup>7</sup>

**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)<sup>8,†</sup>

**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<sup>9,††</sup>

**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<sup>†</sup>

Health Action / First 5  
Commission



Sonoma ACEs Connection



Maternal, Child, and  
Adolescent Health Programs



### Ideas from Focus Group and Interview Participants<sup>†</sup>

#### *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

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

<sup>1</sup> 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.

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

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

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

<sup>5</sup> US Census Bureau, American Community Survey, 2014.

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

<sup>7</sup> US Census Bureau, American Community Survey, 2014.

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

<sup>9</sup> 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.<sup>1</sup> 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.<sup>2</sup> 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)<sup>3</sup>



Percent of Third Grade Children in Public Schools Scoring at or Above the “Proficient” Level on English Language Arts California Standards Test<sup>4</sup>



Percent of Students Graduating from High School within Four Years<sup>5</sup>



“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 kindergarten<sup>6</sup>

**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 cares<sup>7</sup>

**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 Arts<sup>8</sup>

**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 Math<sup>9</sup>

**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 students<sup>10</sup>

**0.04** | **0.05**  
Sonoma | California

**Suspension**  
Rate of suspension per 100 enrolled K-12 public school students<sup>11</sup>

**4.41** | **4.04**  
Sonoma | California

### Educational Attainment

**Less than High School Education**  
% of population age 25+ with no high school diploma<sup>12</sup>

**13.3** | **18.8**  
Sonoma | California

**Post-Secondary Education**  
% of population age 25+ with Associates Degree or higher<sup>13</sup>

**41.5** | **38.8**  
Sonoma | California

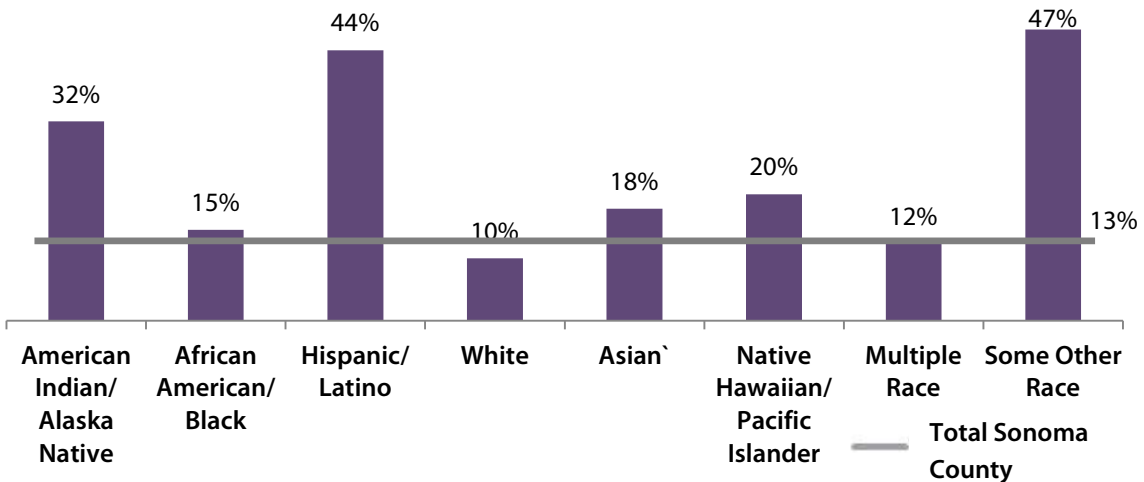
# Access to Education (continued)



## Populations Disproportionately Affected

### Populations at Greatest Risk

Percent of Sonoma County Population (Age 25+) with No High School Diploma by Race/Ethnicity<sup>14</sup>



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<sup>†</sup>

#### Cradle to Career Sonoma County



#### School Districts



#### Colleges/Universities



### Ideas from Focus Group and Interview Participants<sup>†</sup>

#### *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

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

<sup>1</sup> "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](http://www.rwjf.org/content/dam/farm/reports/issue_briefs/2011/rwjf70447).

<sup>2</sup> "A Portrait of Sonoma County; Sonoma County Human Development Report," Measure of America, 2014.

<sup>3</sup> California Department of Education, 2013-14.

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

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

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

<sup>7</sup> US Census Bureau, American Community Survey, 2014.

<sup>8</sup> California Department of Education, 2013-14.

<sup>9</sup> Ibid.

<sup>10</sup> California Department of Education, 2013.

<sup>11</sup> Ibid.

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<sup>12</sup> US Census Bureau, American Community Survey, 2010-14.

<sup>13</sup> Ibid.

<sup>14</sup> 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.<sup>1</sup> 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

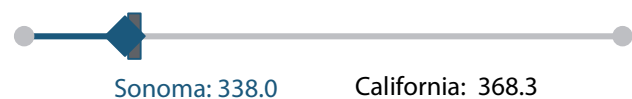
Percent of Renters Spending 30% or More of Household Income on Rent<sup>2</sup>



Percent of Population Living 200% Below Federal Poverty Level<sup>3</sup>



HUD-Assisted Units (per 10,000 housing units)<sup>4,†</sup>



Total HUD-Assisted Units in Sonoma County: 6481 units<sup>5</sup>

“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

† 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.



Sonoma County Community Health Needs Assessment

# Economic & Housing Insecurity

(continued)

## Supporting Data and Key Drivers

### Supporting Data: Housing Quality

**Vacant Housing Units**

% of housing units that are vacant<sup>6,†</sup>

**9.2** | **8.5**  
Sonoma | California

**Overcrowded Rental Environments**

% of renter occupied households with more than 1 person per room<sup>7</sup>

**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<sup>8,††</sup>

**12.8** | **22.7**  
Sonoma | California

**Older Adults in Poverty**

% of adults (age 65+) living below 100% of Federal Poverty Level<sup>9,††</sup>

**7.9** | **10.6**  
Sonoma | California

**Unemployment Rate**

% of civilian non-institutionalized population age 16 and older that is unemployed<sup>10</sup>

**5.0** | **6.8**  
Sonoma | California

### Driver: Education

**Percent Population Age 25+ with No High School Diploma<sup>11</sup>**

**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 Test<sup>12</sup>

**43.0** | **45.0**  
Sonoma | California

### Driver: Cost of Living

### Median Household Income

*Income in past 12 months in 2014 inflation-adjusted dollars<sup>13</sup>*

**\$68k** | **\$62K**

Sonoma

California

### Living Wage

*Annual income required to support one adult and one child<sup>14</sup>*

**\$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.

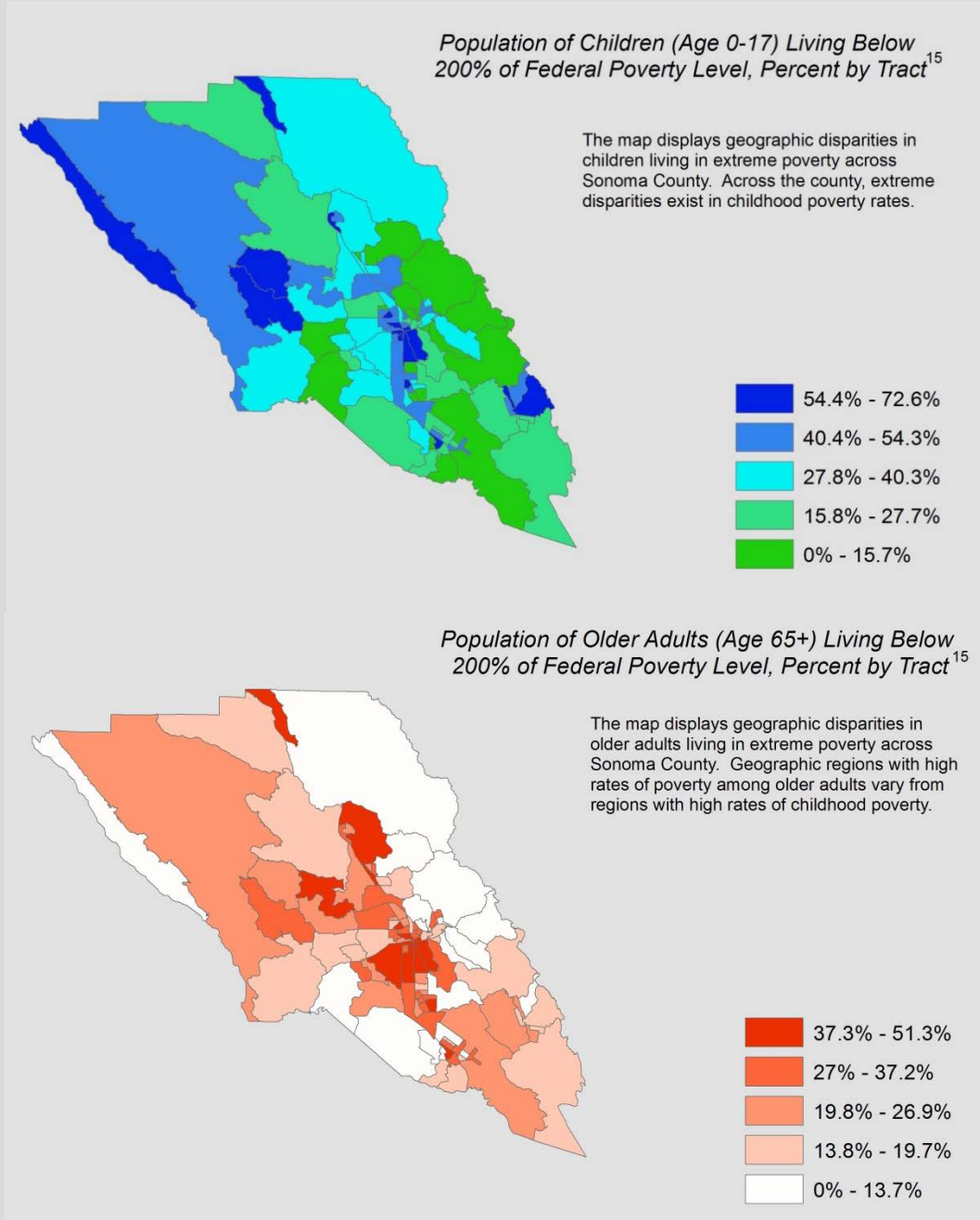


# Economic & Housing Insecurity

(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.

Sonoma County Community Health Needs Assessment



# Economic & Housing Insecurity

(continued)

## Assets and Ideas

### Examples of Existing Community Assets<sup>†</sup>

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<sup>†</sup>

#### 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

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

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

<sup>2</sup> US Census Bureau, American Community Survey, 2014.

<sup>3</sup> US Census Bureau, American Community Survey, 2010-14.

<sup>4</sup> US Department of Housing and Urban Development, 2014.

<sup>5</sup> Ibid.

<sup>6</sup> US Census Bureau, American Community Survey, 2010-14.

<sup>7</sup> US Census Bureau, American Community Survey, 2014.

<sup>8</sup> Ibid.

<sup>9</sup> Ibid.

<sup>10</sup> US Department of Labor, Bureau of Labor Statistics, 2015.

<sup>11</sup> US Census Bureau, American Community Survey, 2010-14.

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

<sup>13</sup> US Census Bureau, American Community Survey, 2014.

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<sup>14</sup> Calculated from *livingwage.mit.edu*; 2015.

<sup>15</sup> 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.<sup>1</sup> 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 Health<sup>2</sup>



**“We have plenty of dentists but hardly anyone that takes public insurance.”**  
– Interviewee

#### Percent of Adults without Dental Exam in the last 12 months<sup>3</sup>



**“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

#### Percent of Youth 2-11 without Dental Exam in the Past 12 Months<sup>4</sup>



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

### 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 population<sup>6</sup>*

**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 2013<sup>7</sup>*

**1: 2,155**  
Sonoma

### Dental Insurance Coverage

*Lack of Dental Insurance, Adult  
% adults without no dental insurance in past year<sup>8,†</sup>*

**38.9**  
Sonoma

### Driver: Access to Care- Seniors

#### Lack of Dental Insurance, Older Adult

*% of adults age 65+ without dental insurance<sup>9,†</sup>*

**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 it<sup>10</sup>*

**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 day<sup>11</sup>*

**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 Level<sup>12</sup>*

**12.8** | **22.7**  
Sonoma | California

#### Population in Poverty

*% of population living below 100% of Federal Poverty Level<sup>13</sup>*

**7.9** | **10.6**  
Sonoma | California

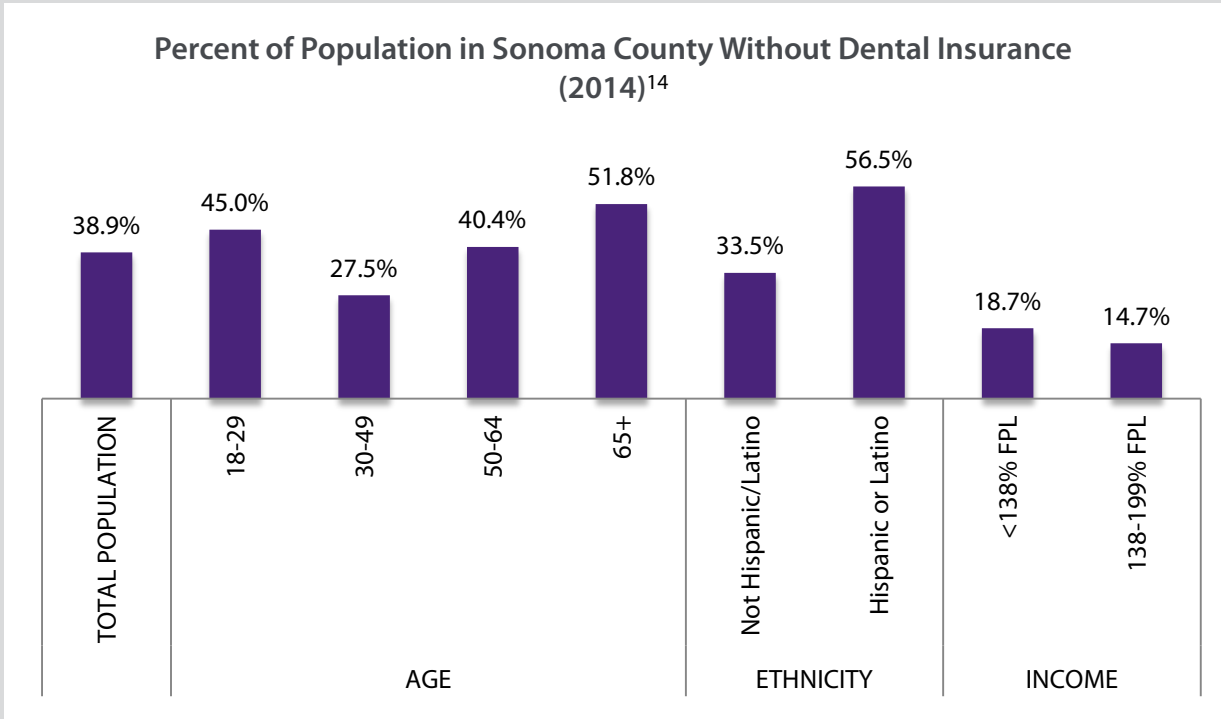
\* Unstable estimate; findings should be interpreted with caution.

† 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<sup>†</sup>

#### Dental Health Network



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



#### School Smiles Program and WIC Dental Days



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

<sup>1</sup> "Health Smile, Healthy You: The Importance of Oral Health," Delta Dental Insurance, accessed October 28, 2015, [https://www.deltadentalins.com/oral\\_health/dentalhealth.html](https://www.deltadentalins.com/oral_health/dentalhealth.html)

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

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

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

<sup>5</sup> Sonoma County Smile Survey, 2014.

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

<sup>7</sup> 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.

<sup>8</sup> Sonoma County Local Health Department File, California Health Interview Survey, 2013-14.

<sup>9</sup> Ibid.

<sup>10</sup> California Health Interview Survey, 2007.

<sup>11</sup> California Health Interview Survey, 2013-14.

<sup>12</sup> US Census Bureau, American Community Survey, 2014.

<sup>13</sup> Ibid.

<sup>14</sup> 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 Physicians<sup>1</sup>

Rate Per 100,000 Population



#### Percent of Adults with a Usual Source of Care<sup>2</sup>

HP 2020 Goal:  $\geq 89.4$



#### Access to Mental Health Providers<sup>3</sup>

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<sup>4,†</sup>

**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)<sup>5</sup>

**14.3** | 17.3  
Sonoma | California

#### Uninsured Population, Youth

% of child population (<age 19) without health insurance<sup>6</sup>

**4.1** | 5.4  
Sonoma | California

#### Insured Population Receiving Medi-Cal

% of insured population receiving Medi-Cal<sup>7</sup>

**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 years<sup>8</sup>

**80.5** | 83.9  
Sonoma | California

#### Pap Test

% of females age 18+ with regular pap test (age-adjusted)<sup>9</sup>

**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)<sup>10</sup>

**55.5** | 57.9  
Sonoma | California

#### Immunized Kindergarteners

% of kindergarteners with all required immunizations<sup>11</sup>

**90.0** | 90.4  
Sonoma | California

#### Vaccinated Older Adults

% of adults age 65+ who have ever received a pneumonia vaccination<sup>12</sup>

**65.2** | 63.4  
Sonoma | California

#### Preventable Hospital Events

Age-adjusted discharge rate per 10,000 population<sup>13,††</sup>

**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.



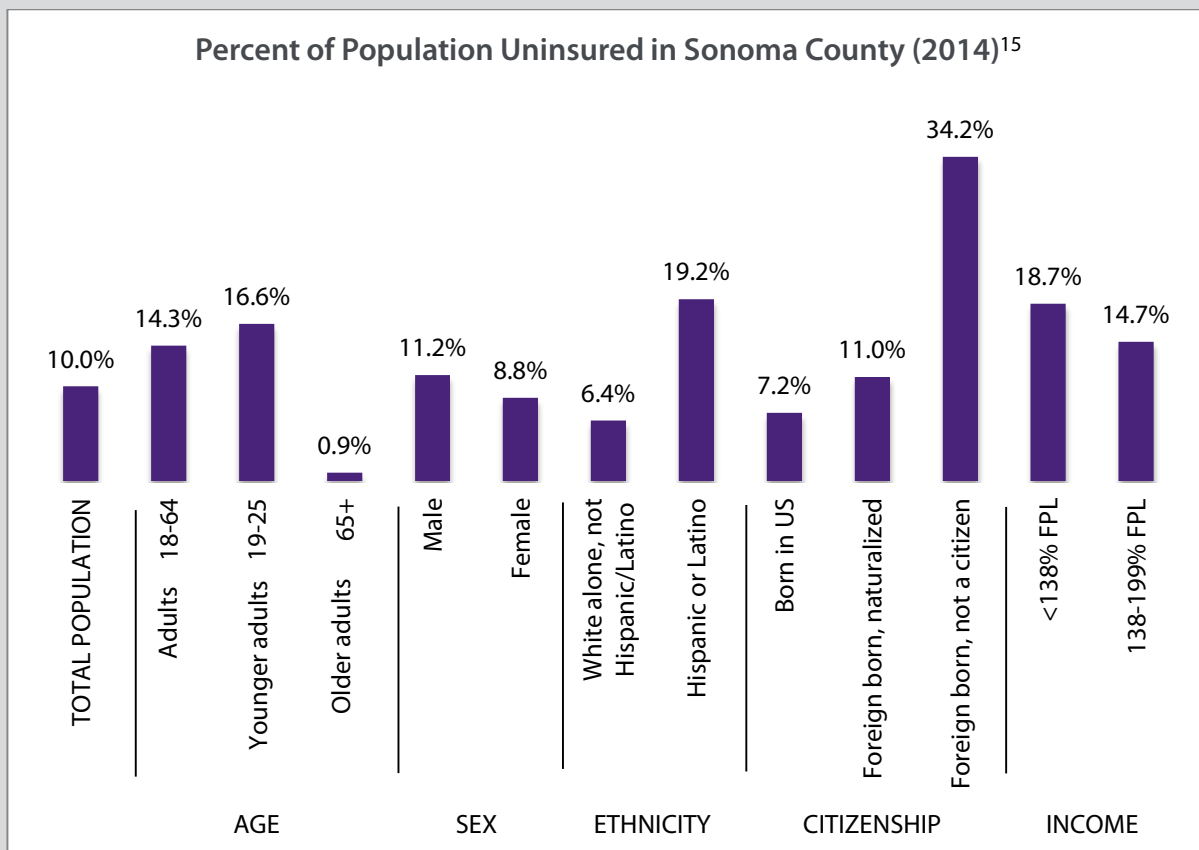
# Access to Health Care (continued)

## 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<sup>†</sup>

#### Medi-Cal Outreach and Support



#### County / Community Collaboration



#### Community Clinics / Mobile Clinics



### Ideas from Focus Group and Interview Participants<sup>†</sup>

- 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

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

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

<sup>2</sup> California Health Interview Survey, 2014.

<sup>3</sup> University of Wisconsin Population Health Institute, County Health Rankings, 2014.

<sup>4</sup> US Department of Health & Human Services, Health Resources and Services Administration, Health Resources and Services Administration, 2015.

<sup>5</sup> US Census Bureau, American Community Survey, 2014.

<sup>6</sup> Ibid.

<sup>7</sup> Ibid.

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

<sup>9</sup> 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.

<sup>10</sup> Ibid.

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

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

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

<sup>14</sup> 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.<sup>1,2</sup> 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 Rate<sup>3</sup>

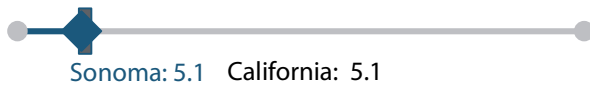
Age-adjusted; Per 100,000 Population

HP 2020 Goal: ≤ 10.2



#### Youth Hospitalization for Mental Health Issues<sup>4</sup>

Rate Per 1,000 Youth Age 5-19



#### Percent of Adult Population Likely Experiencing Serious Psychological Distress in Past Year<sup>5, †</sup>



“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.

## Sonoma County Community Health Needs Assessment

# Mental Health (continued)



## Supporting Data and Key Drivers

### Supporting Data

**Depression, Older Adults**  
% of Medicare beneficiaries with depression<sup>6</sup>

**14.1** | **13.4**  
Sonoma | California

**Depression, Youth**  
% of 11th grade students who felt sad or hopeless almost every day for 2 weeks or more<sup>7</sup>

**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 days<sup>8</sup>

**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/drug<sup>9</sup>

**15.2** | **15.9**  
Sonoma | California

**Mental Health Providers**  
Rate of mental health providers per 100,000 population<sup>10</sup>

**159.2** | **157.0**  
Sonoma | California

### Driver: Social Support and Stress

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

**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 reason<sup>12</sup>

**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 population<sup>13</sup>

366.3 |  
425.0

Sonoma California

Exposure to Poverty  
% population with income at or below 200%  
Federal Poverty Line<sup>14</sup>

29.6 | 36.4  
Sonoma California

Homelessness  
Point in time homeless count in Sonoma  
County<sup>15</sup>

3,107

Sonoma County Community Health Needs Assessment

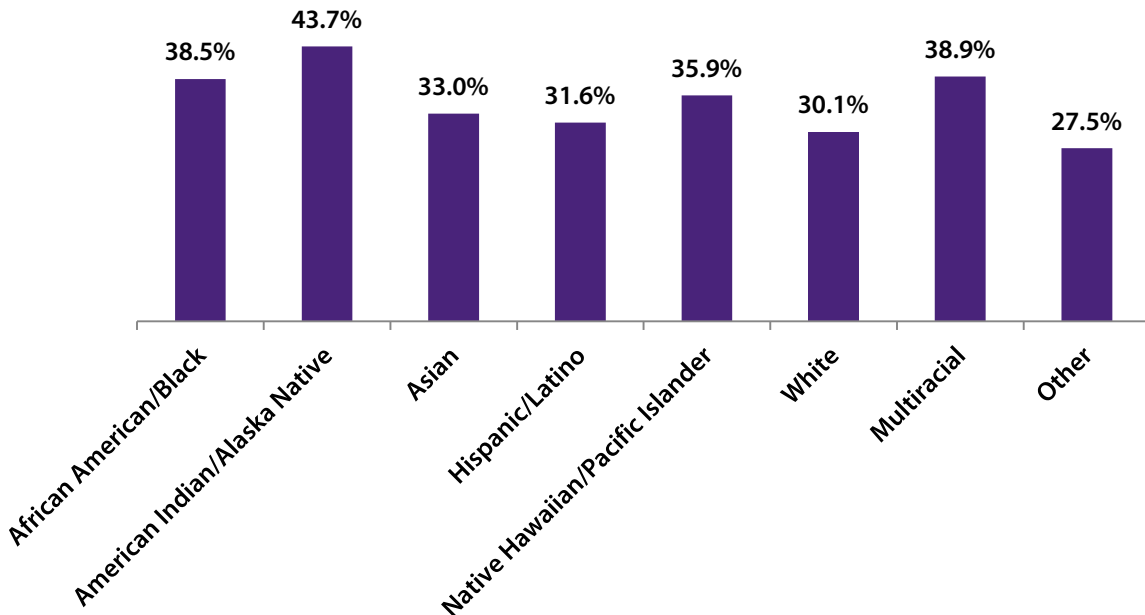


# Mental Health (continued)

## Populations Disproportionately Affected, Assets, and Ideas

### Populations with Greatest Risk

Youth Bullying and Harassment in Sonoma County by Race/Ethnicity<sup>16</sup>



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<sup>†</sup>

### Behavioral Health Crisis Response Services



### Collaboration Between County and Community Partners



### Community Health Clinics



### Ideas from Focus Group and Interview Participants<sup>†</sup>

- **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**

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

<sup>1</sup> Chapman DP, Perry GS, Strine TW. "The Vital Link Between Chronic Disease and Depressive Disorders," Preventing Chronic Disease, 2005; 2(1):A14.

<sup>2</sup> 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.

<sup>3</sup> University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data, 2010-12.

<sup>4</sup> 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.

<sup>5</sup> University of California Center for Health Policy Research, California Health Interview Survey, 2014.

<sup>6</sup> Centers for Medicare and Medicaid Services, 2012.

<sup>7</sup> California Healthy Kids Survey, 2011-13.

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

<sup>9</sup> University of California Center for Health Policy Research, California Health Interview Survey, 2014.

<sup>10</sup> University of Wisconsin Population Health Institute, County Health Rankings, 2014.

<sup>11</sup> 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.

<sup>12</sup> California Healthy Kids Survey, 2011-13.

<sup>13</sup> 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.

<sup>14</sup> U.S. Census Bureau, American Community Survey, 2014.

<sup>15</sup> "Sonoma County Homeless Point-In-Time Census & Survey Comprehensive Report," Sonoma County Taskforce for the Homeless, 2015.

<sup>16</sup> California Healthy Kids Survey, 2011-13.



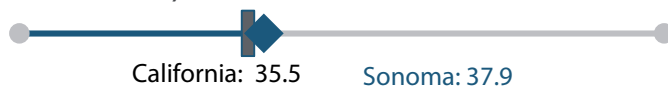
# Obesity and Diabetes

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.<sup>1</sup> 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)<sup>2</sup>



“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

Percent of Youth (Grades 5, 7, 9) Who Are Obese<sup>3,†</sup>



“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

Stroke Mortality Rate<sup>4</sup>  
Age-Adjusted; Per 100,000 Adult Population



### 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.

## Sonoma County Community Health Needs Assessment



# 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.<sup>5</sup>

**18.2** | **20.8**  
Sonoma | California

**Heart Disease Prevalence (adult)**  
% of adults ever diagnosed with heart disease<sup>6</sup>

**9.0** | **6.1**  
Sonoma | California

**Obese Adults**  
% of adults with BMI greater than 30.0<sup>7</sup>

**25.4** | **27.0**  
Sonoma | California

**Adults with Diabetes**  
% of adults ever diagnosed with diabetes<sup>8</sup>

**8.4** | **8.9**  
Sonoma | California

**Ischemic Heart Disease Prevalence (Medicare enrollees)**  
% of Medicare fee-for-service population<sup>9</sup>

**23.7** | **26.1**  
Sonoma | California

**Overweight Youth**  
% of 5,7,9 grade with "needs improvement" for body composition<sup>10</sup>

**20.0** | **19.3**  
Sonoma | California

### Driver: Nutrition

**Youth Consumption of Fruits and Vegetables**  
% youth age 2-13 consuming <5 servings of fruit and vegetables<sup>11</sup>

**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 population<sup>12</sup>

**14.8** | **15.8**  
Sonoma | California



**Adult Consumption of Fast Food**  
% of adults consuming fast food >2 times in past week<sup>13</sup>

**12.2** | **22.3**  
Sonoma | California

**Grocery Stores**  
Grocery stores per 100,000 population<sup>14</sup>

**28.1** | **21.5**  
Sonoma | California

**Fast Food Establishments**  
Fast food establishments per 100,000 population<sup>15</sup>

**61.6** | **74.5**  
Sonoma | California



# Obesity and Diabetes (continued)

## Driver: Physical Activity

### Health Behaviors

% adults with no leisure time activity<sup>16</sup>

**12.8** | **16.6**  
Sonoma | California

% youth in grades 5,7,9 with "high risk" or "needs improvement" aerobic capacity<sup>18</sup>

**32.0** | **35.9**  
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 park<sup>17</sup>

**58.1** | **58.6**  
Sonoma | California

Recreation and fitness centers per 100,000 population<sup>19, †</sup>

**12.6** | **8.7**  
Sonoma | California

## Driver: Clinical Care

### Diabetes Management

% diabetic Medicare patients with HbA1c test in past year<sup>20, ††</sup>

**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)<sup>21</sup>

**13.4** | **16.2**  
Sonoma | California

### Poverty and Food Access

% of population living in a 'food desert' with low food access<sup>22, †††</sup>

**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,

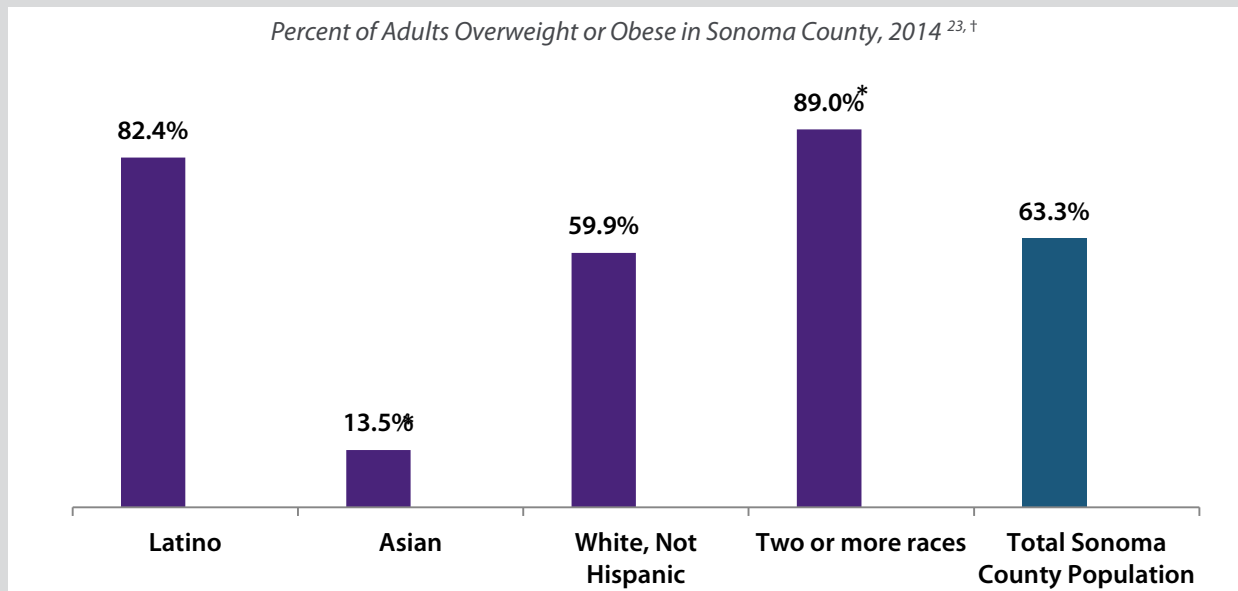
see: [http://www.ers.usda.gov/datafiles/Food\\_Access\\_Research\\_Atlas/Download\\_the\\_Data/Current\\_Version/documentation.pdf](http://www.ers.usda.gov/datafiles/Food_Access_Research_Atlas/Download_the_Data/Current_Version/documentation.pdf).



# 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<sup>†</sup>

#### Food Banks



#### Farmer's Markets



#### Parks and Recreations



### Ideas from Focus Group and Interview Participants<sup>†</sup>

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

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

<sup>1</sup> "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/>.

<sup>2</sup> California Health Interview Survey, 2014.

<sup>3</sup> California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-14.

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

<sup>5</sup> California Department of Public Health, 2011-13.

<sup>6</sup> California Health Interview Survey, 2014.

<sup>7</sup> Ibid.

<sup>8</sup> California Health Interview Survey, 2014.

<sup>9</sup> Centers for Medicare and Medicaid Services, 2012.

<sup>10</sup> California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-14.

<sup>11</sup> California Health Interview Survey, 2011-12.

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

<sup>13</sup> University of California Center for Health Policy Research, California Health Interview Survey, 2014.

<sup>14</sup> US Census Bureau, County Business Patterns. Additional data analysis by CARES, 2011.

<sup>15</sup> Ibid.

<sup>16</sup> Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, 2012.

<sup>17</sup> US Census Bureau, Decennial Census. ESRI Map Gallery, 2010.

<sup>18</sup> California Department of Education, FITNESSGRAM® Physical Fitness Testing, 2013-14.

<sup>19</sup> US Census Bureau, County Business Patterns. Additional data analysis by CARES, 2012.

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

<sup>21</sup> Feeding America. Child Food Insecurity Data, 2012.

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

<sup>23</sup> 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 Cigarettes<sup>1</sup> Age-Adjusted



#### Percent of Adults Reporting Heavy Alcohol Consumption<sup>2,3</sup> Age-Adjusted



#### Liquor Store Access<sup>4,†</sup> 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 days<sup>5</sup>

**13.8** | 10.2  
Sonoma | California

#### Drinking and Driving, Youth

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

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 days<sup>7</sup>

**4.6\*** | 3.4  
Sonoma | California

#### Marijuana Use, Youth

% of 11th grade students reporting marijuana use within the last 30 days<sup>8</sup>

**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 18<sup>9</sup>

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

#### Social Support, Adults

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

**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.

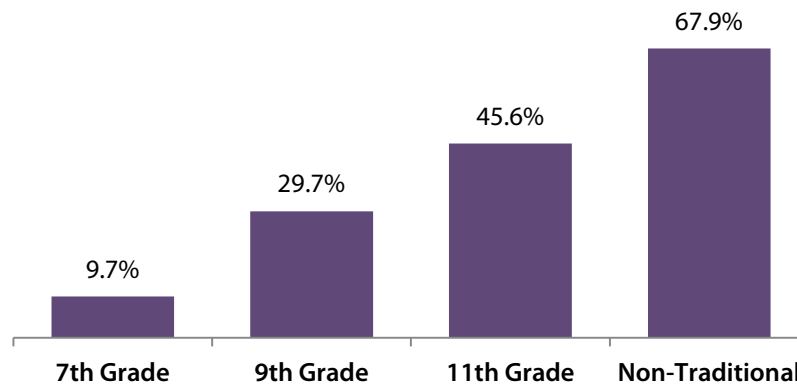
# Substance Abuse (continued)



## Populations Disproportionately Affected

### Populations with Greatest Risks

Percent of Youth in Sonoma County Reporting Alcohol/Illegal Drug Use in the Past Month, by Grade<sup>11,†</sup>



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

<sup>†</sup> "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<sup>†</sup>

#### Coalitions and Partnerships



#### Treatment and Rehabilitation Centers



#### Prevention Programs



### Ideas from Focus Group and Interview Participants<sup>†</sup>

#### *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

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

<sup>1</sup> Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse, 2006-12.

<sup>2</sup> Ibid.

<sup>3</sup> 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.

<sup>4</sup> US Census Bureau, County Business Patterns. Additional data analysis by CARES, 2012.

<sup>5</sup> California Healthy Kids Survey, 2011-13.

<sup>6</sup> Ibid.

<sup>7</sup> California Health Interview Survey, 2013-14.

<sup>8</sup> Ibid.

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

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<sup>10</sup> 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.

<sup>11</sup> California Department of Education, California Healthy Kids Survey and California Student Survey (WestEd), 2011-13.



# 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 Rate<sup>1</sup>

Per 100,000 Population



#### Physical or Sexual Violence by Intimate Partner<sup>2</sup>

Percent of Adults Reporting Intimate Partner Violence After Age 18



#### Homicide, Age-Adjusted Mortality Rate<sup>3</sup>

Per 100,000 Population

HP 2020 Goal: ≤ 5.5



#### Unintentional Injury Mortality Rate<sup>4</sup>

Age-adjusted; Per 100,000 Population

HP 2020 Goal: ≤ 36.0



#### Motor Vehicle Accident Mortality Rate<sup>5</sup>

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



† 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).

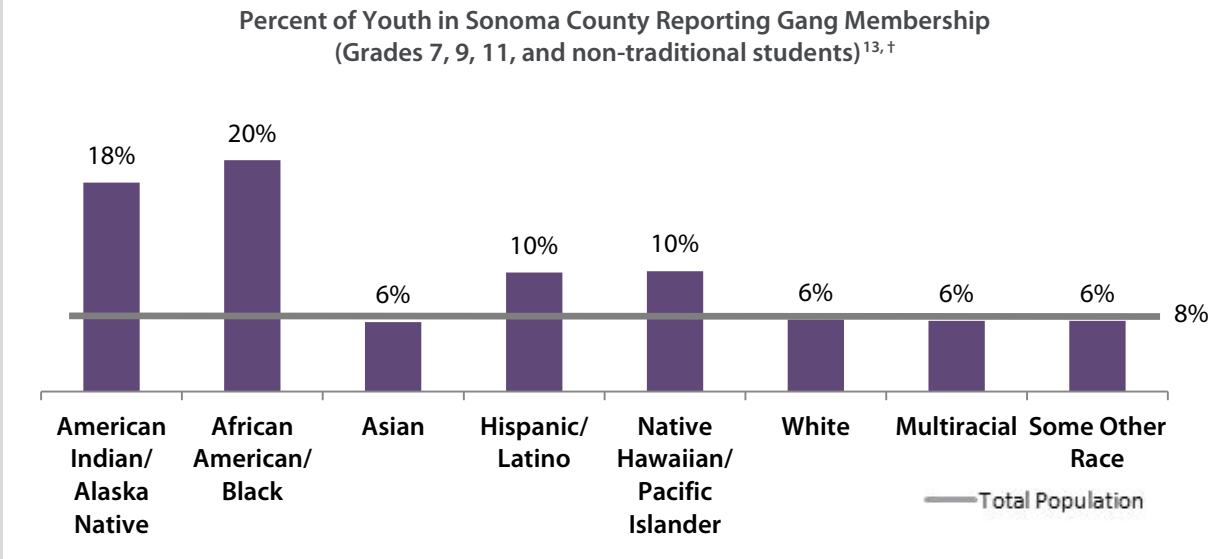




# Violence and Unintentional Injury

(continued)

## Populations Disproportionately Affected



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<sup>††</sup>

Domestic Violence Services



Strong Police Presence, Efforts Against Gang Violence



Community-level Violence Prevention Activities



## Ideas from Focus Group and Interview Participants<sup>††</sup>

- 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.

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<sup>1</sup> 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.

<sup>2</sup> California Health Interview Survey, 2009.

<sup>3</sup> University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data, 2010-12.

<sup>4</sup> "2015 County Health Status Profiles," California Department of Public Health, 2011-13.

<sup>5</sup> University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data, 2010-12.

<sup>6</sup> University of Missouri, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data, 2010-12.

<sup>7</sup> California Healthy Kids Survey, 2011-13.

<sup>8</sup> 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.

<sup>9</sup> California Department of Public Health, EpiCenter Overall Injury Surveillance, 2011-13.

<sup>10</sup> A Hidden Crisis: Findings on Adverse Childhood Experiences in California, Center for Youth Wellness, 2008-13.

<sup>11</sup> California Child Welfare Indicators Project, 2014.

<sup>12</sup> California Healthy Kids Survey, 2011-13.

<sup>13</sup> 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.

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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                                   | Core                                   | 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, OSHPD 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.  | 2006-12         | 2006-12            | 2006-12          |                                    |
|   |  | 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 Department of Health & Human Services, Health Resources and Services Administration, California Office of Statewide Health Planning and Development, OSHPD Patient Discharge Data. Additional data analysis by CARES. | 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  |                           | Sonoma County's Road to the Early Achievement and Development of Youth, Ready to Learn: Findings from the Kindergarten Student   |                 |                    | 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                    | 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          |                                    |
|                        | <b>Core</b>   | 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     | 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                      | University of Missouri, Center for Applied Research and Environmental Systems.   | 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                     | California Department of Public Health, COPH - Death Public Use Data   | 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                      | National Institutes of Health, National Cancer Institute, Surveillance, Epidemiology, and End Results Program, State Cancer Profiles     | 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                      | National Institutes of Health, National Cancer Institute, Surveillance, Epidemiology, and End Results Program, State Cancer Profiles     | 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     | 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%                     | 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 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             |                                    |
| <b>Cancers</b>         |               |   |                                     |                      |              |                               |               |                            |                         |               |                   |                         |                           |  |                 |                    |                  |                                    |

| 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 |
| Potential Health Needs   | 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.                                 | 2011            | 2011               | 2011             |                                    |
|                        |  | 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             |                                    |
|                        |  | 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                        | Centers for Disease Control and Prevention,Behavioral Risk Factor Surveillance System. Accessed via the Health Indicators Warehouse.              | 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                       | University of Missouri,Center for Applied Research and Environmental Systems. California Department of Public Health.CDPH - Death Public Use Data | 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%                        | American Community Survey, 5y   | 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%                       | California Health Interview Survey  | 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%                       | California Department of Education,FITNESSGRAM® Physical Fitness Testing.   | 2013-14         |                    | 2013-14          |                                    |
| 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          |                                    |
| CVD/Stroke             |  | 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 CARFS. | 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 CARFS.   | 2006-10         | 2006-10            | 2006-10          |                                    |
|                        |               | 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%                     |   |                 |                    |                  |                                    |
|                        |               | 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   | 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   | 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 CARFS  | 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 CARFS  | 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                               | University of Wisconsin, Center for Applied Research and Environmental Systems. California Department of Public Health, CDPH - Death Public Use Data Centers for Disease Control and | 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 |  |
|  |  | 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 Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. | 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 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                       | ≤ 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             |                                    |  |
|  | Related                                | Core   | 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 Centers for Disease Control and Prevention, Behavioral Risk Factor Surveillance System. Additional data analysis by CARES. | 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   |   |  |                  |                                    |      |  |
|------------------------------|---------------|---|---|--------------------------------------|---------------------------|-------------------------------|---------------|----------------------------|-------------------------|---------------|-------------------|-------------------------|---------------------------|--|---|--|------------------|------------------------------------|------|--|
| 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          | 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%         | 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%         | 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         | 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           | 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           | 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        | 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%         | 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%         | 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       | 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%          | 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%          | 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%          | 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           | 6.1               | Below benchmark         | State                     | -2.41  | California Department of Public Health, CDPH - Birth Profiles by ZIP Code.  | 2011   |                  | 2011                               |      |  |
|                              | Related       | 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%             | 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                | 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%             | 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. IIS | 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   | 2010-12         | 2010-12            | 2010-12          |                                    |
|                              |               | 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  | 2013            |                    | 2013             |                                    |
|                              |               | 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 |
|---|--|------------------------|--|-------------------|----------|-----------------------|------------|-------------------------|
|   |  |                        | Health Department representative   | Chronic Condition | Minority | Medically underserved | Low-income |                         |
| Meeting, focus group, interview, survey, written correspondence, etc. | Respondent's title/role and name or focus group population         | Number of participants |  |                   |          |                       |            | Date of data collection |
| Interview   | Executive Director,<br>Sonoma County Task Force on the Homeless    | 1                      |  | X                 | X        | X                     | X          | 10/7/15                 |
| Interview   | Director,<br>Clinical Health Services                              | 1                      |  |                   |          |                       |            | 10/6/15                 |
| Interview   | Vice President for Programs,<br>Community Foundation Sonoma County | 1                      |  |                   |          |                       |            | 10/2/15                 |
| Interview   | Division Director,<br>Sonoma County Behavioral Health              | 1                      |  | X                 | X        | X                     | X          | 10/8/15                 |
| Interview   | Executive Director,<br>The John Jordan Foundation                  | 1                      |  | X                 | X        | X                     | X          | N/A                     |
| Interview   | Health Officer,<br>County of Sonoma                                | 1                      | X  |                   |          |                       |            | 10/7/15                 |
| Interview   | Chief Medical Officer,<br>Alliance Medical Centers                 | 1                      |  | X                 | X        | X                     | X          | 10/23/15                |
| Interview   | Chief Executive Officer,<br>Santa Rosa Community Health Centers    | 1                      |  |                   |          |                       |            | 10/6/15                 |
| Interview   | Chief Administrative Officer,<br>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,<br>Northern California Center for Well-being                | 1                      |                                  | X                 | X        | X                     | X          | 10/6/15                 |
| Interview   | Chief Administrative Officer,<br>Sutter Medical Center                          | 1                      |                                  |                   |          | X                     |            | 10/21/15                |
| Interview   | Program Analyst,<br>Mayor's Gang Prevention Task Force at<br>City of Santa Rosa | 1                      |                                  |                   |          |                       |            | 10/20/15                |
| Interview   | Executive Director,<br>Hanna Boys Center  | 1                      |                                  |                   |          |                       |            | 10/16/15                |
| Interview   | County Superintendent,<br>Sonoma County Office of Education                     | 1                      |                                  | X                 |          |                       |            | 10/7/15                 |
| Interview   | Executive Director,<br>Community Child Care Council of<br>Sonoma County         | 1                      |                                  |                   |          |                       |            | 10/7/15                 |
| Interview   | President,<br>Santa Rosa Junior College   | 1                      |                                  |                   | X        |                       | X          | 9/29/15                 |
| Interview   | Division Director,<br>Adult and Aging Services                                  | 1                      |                                  |                   |          |                       |            | 10/8/15                 |
| Interview   | Program Director,<br>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,<br>Family, Youth and Children's Services<br>Human Services Department | 1                      |                                  |                   |          |                       |            | 10/2/15                 |
| Interview   | CEO,<br>YWCA   | 1                      |                                  | X                 | X        | X                     | X          | 10/19/15                |
| Interview   | Regional Director,<br>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 11<sup>th</sup> 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!



# 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. |
| <b>Weighting</b>                  | <b>1</b>  | <b>1.5</b>   | <b>1.5</b>  | <b>1</b>  |
| 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                       |   |  |   |   |