Sonoma County
Community Health Needs Assessment

Sonoma County 2013–2016

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I. EXECUTIVE SUMMARY

The Sonoma County Community Needs Assessment (CHNA) 2013 is a collaborative effort by Sutter Medical Center of Santa Rosa, St. Joseph Health System – Sonoma County, Kaiser Permanente Medical Center – Santa Rosa and the Sonoma County Department of Health Services to assess the health status of Sonoma County residents and to identify critical areas for health improvement. The 2013 Assessment continues a successful collaboration between the hospital partners and local health department, begun in 2000, to identify and jointly address significant community health issues.

Since 1994, not-for-profit hospitals in California have been required by state law to assess community health needs every three years and to use that assessment as the basis for community benefit planning and coordination. Beginning with tax year 2013, under the requirements of the Federal Affordable Care Act (ACA), not-for- profit hospitals throughout the United States are also required to file a community health needs assessment with the Internal Revenue Service. ACA regulations include additional requirements to prioritize community health needs through a comprehensive review of local health data and the gathering of local community input. In 2014, each not-for-profit hospital will be required to prepare an implementation plan that shows how the hospital will use its community benefit resources and the assets of local communities to address the prioritized health needs.

Data Collection and Analysis

The goal of the CHNA data development process was to gather, analyze and summarize current local data on the residents of Sonoma County, their health status and the variety of features and conditions which impact their health, healthy development and quality of life. To accomplish this, the CHNA partners developed and utilized both primary and secondary data sources. Over the course of 5 months (April – September 2012), the partners conducted the following activities to create the 2013 Sonoma County CHNA:

- Developed a demographic summary of Sonoma County's current population along with population growth projections when available. Information is provided on a variety of demographic indicators including population distribution, age, ethnicity, income, healthcare coverage, education and employment.
- Assembled summary data from a variety of secondary sources identifying health behaviors and conditions that compromise the health and healthy development of children and contribute most prominently to illness and injury, disability and death for Sonoma County adults and children. Where known, information on contributing factors is presented along with each health indicator. Health disparities are highlighted.
- Conducted key informant interviews, community-based focus groups and a countywide random telephone survey to gather data on health status and elicit information on

community health issues of greatest concern and perspectives on local opportunities to improve population health and/or the healthcare delivery system.

Results of the Community Needs Assessment Priority Setting Process

With completion of the information-gathering phase in September 2012, the Community Health Improvement Committee (CHIC) convened a priority-setting session engaging 20 Sonoma County health and community leaders to review the data and work together to select priority health issues for inclusion in CHNA document. Recommendations were developed using a set of selection criteria developed by the CHNA planning group along with information from the CHNA data profile, findings from the key informant interviews, focus groups, telephone survey respondents and other local data sources.

The health priorities identified are:

1. **Healthy eating and physical fitness**. Poor nutrition and lack of physical activity are driving a national and local obesity epidemic and are contributing to increasing rates chronic disease, disability and premature mortality in Sonoma County. Low-income children and families are especially at risk when they reside in neighborhoods that offer few options to obtain healthy, nutritious food or engage safely in physical activity. Expansion of current efforts in schools and communities to improve nutrition and fitness among youth and adults can help to reduce the growing burden of disease.
2. **Gaps in access to primary care**. Strong primary care systems are associated with improved health outcomes and reduced health care costs. While most Sonoma County residents have a regular source of care and can access health care when they need it, too many do not. Those who are uninsured, low-income, or are members of racial and ethnic minorities are less likely to have an ongoing source of care and more likely to defer needed care, medicines and diagnostics, often at the cost of unnecessary suffering and poor health outcomes. Increasing access to affordable, prevention-focused primary care can help to eliminate health disparities and promote health and wellbeing.
3. **Access to services for substance use disorders**. Treatment works. Early screening, intervention and appropriate treatment for harmful substance use and addiction behaviors is critical to intervening with teens, pregnant women and others who can benefit from treatment. Unfortunately, despite increasing levels of addiction, access to substance abuse treatment in Sonoma County is severely limited for low-income individuals without healthcare coverage. Insuring timely access to culturally competent substance abuse treatment, tailored to the specific needs of those seeking help can break the cycle of addiction and benefit individuals, families and the community.
4. **Barriers to healthy aging**. People over 60 now make up a larger proportion of the population of Sonoma County than ever before. As growth in this population continues, it will challenge families and communities to provide the support seniors need to stay

healthy, safe, engaged and independent. Current senior service "systems" are fragmented, under-funded and often difficult for seniors and their families to understand and utilize. Low-income seniors are especially at risk for neglect, abuse and isolation. Lack of adequate, local supportive services often result in early institutionalization, poor health outcomes and reduced quality of life for many vulnerable seniors. Further development of community-based systems of services and supports for seniors can improve health outcomes and quality of life and significantly reduce costs for long-term institutional care.

5. **Access to mental health services.** Many mental health problems can be effectively treated and managed with access to assessment, early detection, and links with ongoing treatment and supports. In Sonoma County, however, many low income individuals with mental health concerns do not have access to the treatment they need. Insufficient private insurance coverage for mental health services and insufficient availability of publicly-funded treatment services are significant barriers for many. Limited integration of mental health services within the health care system also leads to missed opportunities for early problem identification and prevention.
6. **Disparities in educational attainment.** Educational attainment is the single greatest predictor of both income and employment status in later life and both factors are powerful determinants of health and wellbeing. In Sonoma County, Hispanics currently lag behind their White counterparts in educational attainment at all levels. Just over 6% of Whites do not have a high school diploma as compared with 45.9% of the Hispanic population. Among current students, 93.6% of White 9th - graders graduate from high school 4 years later as compared with only 64.4% of Latino students.
7. **Cardiovascular disease.** Cardiovascular disease is the third leading cause of death for people ages 18-59 in Sonoma County. For residents, age 60 and older, coronary heart disease and stroke are the second and third most common cause of death, behind cancer. Major behavioral contributors to cardiovascular disease include tobacco use, physical inactivity, unhealthy diet and harmful use of alcohol. Education and prevention efforts targeting these "lifestyle" choices and behaviors should be expanded along with continued emphasis on early detection and management of chronic disease.
8. **Adverse childhood exposure to stress (ACES).** "Adverse childhood experiences (ACES)," which include a variety of ongoing conditions or events that can be categorized as recurrent childhood trauma, have been documented to lead to health and social problems, risk-taking behaviors and a shortened lifespan for the adults who survive them. ACES have been linked to a range of adverse health outcomes in adulthood, including substance abuse, depression, cardiovascular disease, diabetes, cancer, and premature mortality. The prevalence of ACES underscores the need for additional efforts to reduce and prevent child maltreatment and associated family dysfunction and

the need for further development and dissemination of trauma-focused services to treat stress-related health outcomes associated with ACES.

9. **Access to health care coverage.** Insuring access to affordable, quality health care services is important to protecting both individual and population health, eliminating health disparities and promoting overall quality of life in the community. For uninsured people, the cost of both routine and emergency care can be financially devastating. Individuals without health care insurance coverage may defer needed care, diagnostics and medicines for themselves and their families and may, as a result, experience higher rates of preventable illness, suffering, disability and mortality than those who have insurance. While a significant portion of Sonoma County's uninsured population will be eligible for more affordable health care coverage under The Affordable Care Act, financial barriers may still exist for low-wage earners who are unable to meet premium requirements. And, undocumented individuals will continue to be ineligible for publicly-funded coverage, leaving many individuals and families vulnerable.
10. **Tobacco use.** Approximately one-third of all tobacco-using Americans will die prematurely from lung cancer, emphysema, cardiovascular disease and other causes related to their dependence on tobacco. Chewing tobacco is a principal contributor to oral cancers. Most smokers become addicted before the age of 19. Those who start smoking young are more likely to have difficulty quitting and more likely to develop smoking-related illness and disability. Sonoma County's adult smoking rate does not meet the Healthy People 2020 target and is higher than the California average. Smoking rates for teens also exceeds both national and state-level benchmarks. Education programs to prevent smoking initiation among youth should be strengthened along with efforts to expand access to cessation programs for both youth and adults.
11. **Coordination and integration of local health care system.** Integration of health care services may take a variety of forms, but essentially consists of the coordination of care to reduce fragmentation and unnecessary use of services, prevent avoidable conditions, and promote independence and self-care. The ability of care providers to effectively develop and use Electronic Medical Records will be critical to the coordination and integration of care. The Affordable Care Act expands health care coverage options for more Sonoma County residents. To maximize resources and provide high quality health care for newly insured patients and those already established in care, local health care services must be better coordinated and integrated with an emphasis on those most vulnerable – the aged, those living in poverty or geographic isolation and those with multiple disabilities.
12. **Disparities in oral health.** Poor oral health status can threaten the health and healthy development of young children and compromise the health and wellbeing of adults. Low-income children suffer disproportionately from dental caries in Sonoma County.

Low-income residents have few options for affordable oral health care and even those with insurance find access to preventive services severely limited. Fluoridated drinking water has proven to be an effective public health measure for prevention of tooth decay, yet only 3% of the public water supply in Sonoma County is fluoridated. Among the cities, only Healdsburg fluoridates its water. Stronger prevention initiatives and expanded access to prevention-focused oral health care are critical to protecting the health and wellbeing of low-income children and adults.

13. **Lung, breast, and colorectal cancer.** With the exception of stomach cancer, Sonoma County's all-cancer incidence is higher than the California rate. Research shows that routine screening for certain cancers, including breast, cervical and colorectal cancers, can increase detection at an early and often treatable stage, thereby reducing morbidity and mortality. Lung, breast, and colorectal cancer were identified as priorities because they are significant contributors to morbidity and mortality in Sonoma County and present significant opportunities for early detection through expanded education and screening.

Health Priority Profiles and Community Assets

A profile was prepared for each of the thirteen health priorities including the rationale for selecting each issue as a priority. A list of community assets per priority are identified as consideration for collaboration opportunities and to leverage efforts to address each selected issue.

Next Steps

The purpose of the Community Health Needs Assessment (CHNA) 2013-2016 is to document key information on the health and well being of Sonoma County residents. The CHNA will be used by the hospital partners to develop Community Benefit implementation strategies as required by the Affordable Care Act. The CHNA will also be made available as a resource to the broader community. It is hoped that, in this way, the CHNA be a useful resource for further communitywide health improvement efforts.

Please visit www.healthysonoma.org <http://www.healthysonoma.org> for copies of each organization's implementation plan and for more information about community health issues in Sonoma County.

II. INTRODUCTION AND BACKGROUND

Community Needs Assessment Purpose

Community health needs assessments serve a central role in supporting hospitals, practitioners, and policy-makers to identify the greatest health needs in their communities. Recognizing that most needs are complex and require collaboration and multiple solutions, needs assessments establish the essential foundation for vital planning that can focus health care and community benefit resources to address health care disparities and maximize health improvement.

Since 1994, California State law has required not-for-profit hospitals in California to assess community health every three years and to use that assessment as the basis for community benefit planning and coordination.

Sonoma County Community Health Needs Assessment – History

Health Needs Assessment. The Sonoma County Health Alliance (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), a partnership of the three local hospitals, Sutter Medical Center, Saint Joseph Health Sonoma County and Kaiser Permanente Santa Rosa, and the Sonoma County Department of Health Services have collaboratively conducted the Sonoma County Community Health Needs Assessment

This Committee, partnering with other health care, education and social services organizations has led many important community health improvement projects, including 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.

Health Needs Assessment 2001 Major issues identified by the 2001 Assessment were community concerns about access to health services and the need for diversity in the health care workforce. This focus resulted in the Healthcare Workforce Development Roundtable and a partnership with Santa Rosa Junior College to offer ongoing educational, scholarship and training programs to increase the diversity of the healthcare workforce in Sonoma County. The data collected in the 2001 Assessment also raised concerns about the safety of Sonoma County's senior citizens.

Health Needs Assessment 2005 analyzed a broad spectrum of community health issues, with a particular focus on the rapidly growing senior population. The assessment led to collaboration with the Area Agency on Aging and the establishment of the Senior Safety Task Force focusing

on a variety of senior needs, including a countywide implementation of evidence based fall prevention programs.

Community Health Needs Assessment 2008 shifted the focus to issues related to the health and well being of Sonoma County children. The assessment and recommendations for improvement addressed fundamental issues such as access to dental care, childhood weight and physical fitness, support for healthy lifestyle choices and the impact of substance abuse on child and teen development.

Community Health Needs Assessment 2011 continued the focus on the four issues (above) facing children and highlighted the expanded activities and efforts with the founding of Health Action and its data-driven agenda to improve the health of Sonoma County residents through individual, local and countywide measures. The assessment explored Health Care Reform's potential impact on the service delivery system, care coordination and prevention services.

III. SONOMA COUNTY COMMUNITY HEALTH NEEDS ASSESSMENT 2013

A. Improving Community Health – A Comprehensive Effort

Community Health Needs Assessment 2013. As part of the federal requirements included in the Affordable Care Act (ACA), nonprofit hospital systems under 501(c)(3) status are required to conduct a broad based community health needs assessment (CHNA) at least once every three years, beginning with tax year 2013. While generally consistent with California (SB697) requirements, the ACA also requires that that the CHNA development process incorporate expertise and feedback from specific individuals and groups (community leaders, residents and public health experts), that the CHNA be made available to the public online, and that the CHNA be filed with the IRS.

The 2013 CHNA process has been conducted against a backdrop of significant local and national change. New models for healthcare delivery are developing across the country, informing and stimulating efforts to make local health care delivery systems more effective and efficient. The Affordable Care Act, with its promise of expanded access and its emphasis on the prevention of chronic disease and the elimination of health disparities, represents a new and powerful platform from which to address the basic issues of access, affordability and quality. An emerging understanding of the impact of social determinants on health status is changing long-held beliefs about prevention and health promotion. These and a variety of other local initiatives and developments, highlighted below, are nurturing an environment of collaboration, innovation and change, which has the potential to improve health and wellbeing for all Sonoma County residents.

Aligning with Triple Aim. Triple Aim is a framework developed by the Institute for Healthcare Improvement (IHI) that describes an approach to optimizing health system performance. It is IHI's belief that new designs must be developed to simultaneously pursue three dimensions that:

- Enhance the patient experience of care (quality, access, and reliability)
- Improve the health of populations
- Reduce or control the cost of health care

The IHI Triple Aim entails ambitious improvement at all levels of the system. To be effective, it is important to harness a range of community determinants of health, empower individuals and families, substantially broaden the role and impact of primary care and other community based services, and assure a seamless system of care. The Affordable Care Act (ACA) reflects Triple Aim thinking, including: accountable care organizations (ACOs), bundled payments, and other innovative financing approaches; new models of primary care, such as patient-centered medical homes; sanctions for avoidable events, such as hospital readmissions or infections; and the integration of information technology.

The Affordable Care Act (ACA). Together, the Patient Protection and Affordable Care Act and the Reconciliation Bill make unprecedented investments in health delivery systems that will fundamentally change the country's health insurance and health care delivery systems. The dramatic expansion of insurance coverage will mean more people can access primary and preventive care. The law's direct investment in health centers and in the primary care workforce will provide a necessary backbone of support for service delivery. The Affordable Care Act expands access to health care for many people who had not been able to obtain coverage before, including people with pre-existing conditions, people in their 20s whose coverage under their parents' insurance used to be terminated, and people with incomes above previous Medi-Cal limits.

Patient Centered Medical Home (PCMH). While the medical home concept has its origins in pediatric care, the concept has expanded as the general healthcare system shifts from a focus on episodic acute care to a focus on managing the health of defined populations, especially those living with chronic health conditions. Sonoma County's community health centers, working with Redwood Community Health Coalition (RCHC), are developing the patient centered medical home. The PCMH approaches the organization and delivery of health care around the patient's needs. New healthcare models like the PCMH provide greater access to health care providers, the coordination of care and individual empowerment over health decisions.

Focus on Collective Impact. Sonoma County health and social services organizations have a history working collaboratively across sectors on issues of mutual concern. "Collective impact" is an approach to solving societal problems based on the idea that coordination of efforts among organizations working toward similar goals can result in greater impact in the community. A collective impact approach requires the commitment of all sectors – including nonprofits, government, business, and philanthropy – to coordinate their efforts around a clearly defined goal. All collective impact initiatives share five key components: a common agenda, shared measurement, mutually reinforcing activities, continuous communication, and infrastructure support.

Fostering Understanding about Social Determinants. Complex relationships exist between the health status of populations and socioeconomic factors such as income, education level, stress and generational racism. The research is clear that shortfalls in medical care are responsible for a fraction of illness and death. Also important are the conditions in which people live, work and age. A third group of factors, social and economic conditions, are also now recognized as key determinants of health status. Social and economic Inequities can contribute to inequalities in health status. While it is difficult at the local level to change underlying conditions such as generational racism, stress and income inequity, it is possible to address the neighborhood conditions (both natural and built) that can perpetuate these health inequities. Place-based projects in Sonoma County like Health Eating Active Living (HEAL) and Health Action, that focus on changing policies and practices in schools, places of employment and other community settings are seen as promising strategies to reduce disparities and promote community health.

Reducing Health Disparities. Health disparities are differences in the incidence, prevalence, mortality, and burden of diseases and other adverse health conditions that exist among specific population groups. In Sonoma County, communities of color and low-income families and individuals suffer disproportionately from lack of access to health care and the impact of social determinants and the built environment on their health and wellbeing. Recognition of the role of health disparities is driving new prevention strategies focused on improving health by enhancing access to economic, educational, employment, and housing opportunities.

Leveraging Opportunities

The Community Health Needs Assessment is a critical planning document for the hospitals, and a call to action for the community on health needs. Every individual and organization can find a place on ***The Spectrum of Prevention*** (Appendix I.) and join the work to improve overall health and well being in Sonoma County.

B. Community Health Needs Assessment Report Overview

The 2013 Community Health Needs Assessment provides a guide for the hospitals' community benefit planning, as well as important information to inform other local planning efforts to strengthen the health of the community.

The 2013 Sonoma County Community Health Needs Assessment includes the following sections:

CHNA Data Development Process (Section IV.)
This section describes the various methods used by the CHNA partners to collect and analyze both primary and secondary data from local, state and national sources. This section highlights findings from the key informant and focus group processes and telephone surveys and describes secondary data sources utilized in the development of the CHNA.

Population Overview (Section V. A.)
This section provides a demographic summary of Sonoma County's current population and includes population growth projections when available. Information is provided on a variety of demographic indicators including age, ethnicity, income, healthcare coverage, education and employment.

Leading Health Indicators (Section V. B.)
This section contains summary data from a variety of secondary sources identifying health conditions that compromise the health and healthy development of children and contribute most prominently to illness and injury, disability and death for Sonoma County adults and children. This information is presented using the following age categories:

- Prenatal to first birthday
- Ages 1 to 12
- Age 13 – 17
- Adults 18 to 60
- Seniors 60 and over

Where known, information on contributing factors (e.g. lack of access to care) and risk behaviors (e.g. smoking rates) is presented along with each health indicator. Where significant, health disparities among specific sub-populations are also highlighted.

Prioritized Community Health Needs (Section VI)
This section highlights a set of health issues that have been identified by a panel of community health and social service experts convened through the CHNA process to develop consensus recommendations on health issues of greatest urgency for Sonoma County. Recommendations

were developed using information from the data profile, findings from the key informant, focus group and telephone surveys and other local data sources. A description of the process and criteria for priority setting is included along with a brief rationale for selection of each priority health issue. An asset inventory of local resources that could be leveraged to address each priority is also included.

Conclusion and Next Steps (Section VII)
This section includes information on how the CHNA will be used to develop implementation plans for each of the participating hospitals and on how the CHNA itself will be made available as a resource to the broader community.

IV. CHNA DATA DEVELOPMENT PROCESS

The goal of the CHNA data development process was to gather, analyze and summarize current local data on the populations of Sonoma County, their health status and the variety of features and conditions which impact their health, healthy development and quality of life. To accomplish this, the CHNA partners collaborated to develop and utilize both primary and secondary data sources. Over the course of 6 months (April – September 2012), the partners conducted the following activities to create the 2013 Sonoma County CHNA.

A. Primary Data Collection

Key Informant Interviews with Local Experts

We recognize that we cannot improve the health of our communities alone... I feel that there is a role of everyone in creating a healthy community. Services are not going to get us out of this as evidenced by the data on mortality. We are going broke. It comes back to prevention.
Key Informant – 2012

The CHNA project partners identified a panel of 18 key informants. Key informants were selected for their expertise in a broad variety of health and health-related disciplines including hospital and primary care, public health, maternal and child health, human services, business and education. Project consultants interviewed key informants individually using a standardized set of questions designed to elicit information on the local health issues of greatest concern and perspectives on local opportunities to improve population health and/or the healthcare delivery system. Despite the diversity of the key informant group, a number of common themes emerged from the interview process.

These themes are:

- **The health care system is changing due to market pressures and Health Care Reform.** Many key informants expressed their support for increased integration across the health care delivery system, a renewed emphasis on primary care, continued development of

patient centered medical homes and adopting a population health framework to guide enhanced collaboration and system integration.

- **New financial incentives within the delivery system are key to improving health and health care.** Informants believed that the Triple Aim goals of enhanced patient experience, improved health outcomes, and cost effectiveness must be supported with a system of financial incentives for health care providers at all levels.
- **Changes in composition of the health care workforce are needed.** Concern was expressed about the capacity of the county's primary care system and noted that developing and training new types of health workers (promotores, home health workers, etc.) could help expand capacity and achieve greater cost effectiveness in care delivery.
- **Sonoma County should strengthen collaboration and grass roots efforts to address community health and reduce health disparities.** Reducing health disparities, particularly among children, is critical to health improvement. Respondents mentioned a number of local collaborations that focus on addressing health disparities, promote shared goals and aim to achieve collective impact in community health. They emphasized the need to continue the work of the Community Health Improvement Committee (CHIC), Health Action, the Care Transitions Project, the Healthy Eating Active Living Initiative (HEAL), and other upstream approaches now underway.
- **The impact of social determinants on health is becoming better understood as key to population health.** Inequities in education, income, access to care and other socio-economic factors lead to inequalities in health status. Place-based projects like HEAL and Health Action, that focus on changing policies and practices in schools, places of employment and other community settings are seen as promising strategies to reduce disparities and promote community health.
- **Continue upstream investments that focus resources on community health and prevention.** Sonoma County's leadership has embraced the importance of making investments in the community to reduce the need for future spending for public services.
- **Sonoma County does not have the infrastructure to support its rapidly growing senior population.** Sonoma County's population is aging; seniors are living longer, becoming more frail as they age and requiring more assistance. The current senior service system is fragmented and often difficult to access. The costs, both human and financial, associated with caring for seniors in institutional settings are not sustainable. Resources and attention must go to addressing the needs of this growing and vulnerable population.

A roster of key informants and the key informant interview questions utilized in the process may be found in Appendix II.

Community Based Focus Groups

During June and July 2012, St. Joseph Health System conducted a series of targeted, community-based focus groups on behalf of the project partners. The goal of the focus group process was to gather information from residents of low-income neighborhoods on their health concerns, the challenges they face in maintaining health and their ideas on how to improve their community's health and wellbeing. Four focus groups were held, averaging 8 participants per group. Groups were facilitated in both Spanish and English, based on group make-up. The groups were conducted in the communities of Sonoma Valley, Rohnert Park, Santa Rosa, and Cloverdale and were facilitated by St. Joseph's staff using standardized questions approved by the CHNA partnership.

The most often mentioned community conditions that contribute positively to health were: neighborhood safety, strong relations with neighbors, community members working together on issues, access to healthy foods and family recreation opportunities.

The top health concerns identified by focus group members were: Obesity, diabetes and high blood pressure, access to drugs, local markets selling alcohol and unhealthy foods, and access to healthy foods and recreational facilities.

A copy of the focus group questions utilized in the process as well as the location and a participant profiles may be found in Appendix III.

BRFSS - A Telephone Survey of Sonoma County Residents

In the spring of 2012, St Joseph Health System contacted 1500 people (839 completed the survey) using a survey tool incorporating questions from the national Behavioral Risk Factor Surveillance System (BRFSS) survey. The Survey provided valuable information on local health status, health behaviors, experience with the local health systems and highlighted the links between social determinants, predominantly income and educational attainment, and disparities in health and health care access.

B. Secondary Data Collection

The following data sources were used to prepare the sections on Sonoma County geography, demographics and socio-economic factors and leading health indicators.

Data	Sources
Demographics	
Population	California Dept. of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State* (2011-2012)

Data	Sources
	U.S. Census Bureau, *2010 Census Tracts Reference Maps*; U.S. Census Bureau, *2006-2010 ACS 5-year Estimates*
Age of Population	California Dept. of Aging, *California Aging Population Demographic Projections for Intrastate Funding Formula* (2011)
Ethnicity	California Dept. of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State* (2011-2012)
Births	California Dept. of Public Health, *Birth Statistical Master Files* (2010); California Dept. of Public Health, *Vital Statistics Query*
Income and Wealth	Board of Governors of the Federal Reserve System, *Survey of Consumer Finances* (2010)
	U.S. Census Bureau, *2006-2010 ACS 5-year Estimates*, Table DP03 Selected Economic Characteristics
	U.S. Census Bureau, *2006-2010 ACS* (reported in 2010 inflation adjusted dollars)
	U.S. Census Bureau, *2010 ACS 1-Year Estimate*
Poverty	U.S. Census Bureau, *2006-2010 ACS 5-Year Estimates*, Table B17024 Age by Ratio of Income to Poverty Level in Past 12 Months; Table S1702 Poverty Status in the Past 12 Months of Families
	U.S. Census Bureau, *2005-2009 American Community Survey, 5-Year Estimates*, Table C17002 Ratio of Income to Poverty Level in the Past 12 Months; Poverty Status by Sex by Age?
Employment	Sonoma County Economic Development Board, *Sonoma County Indicators* (2012) (abridged)
	U.S. Census Bureau, *2006-2010 ACS 5-Year Estimates*, Table DP03 Selected Economic Characteristics
Educational Attainment	U.S. Census Bureau, *2006-2010 ACS 5-Year Estimates*, Table S1501 Educational Attainment; Table C15002H Sex by Educational Attainment for the Population 25 Years and Over (White Alone, Not Hispanic or Latino); Table C15002I Sex by Educational Attainment for the Population 25 Years and Over (Hispanic or Latino)
Housing	U.S. Census Bureau, *2006-2010 ACS 5-Year Estimates*, Table DP04 Selected Housing Characteristics; Table S2502 Demographic Characteristics for Occupied Housing Units
	Sonoma County Task Force for the Homeless, *Sonoma County Homeless Census and Survey* (2011)
Food Security	County of Sonoma Dept. of Health Services, *Sonoma County Community Food Assessment* (July 2011)
	California Food Policy Advocates, *2010 Survey*
	Sonoma County Department of Health Services, *WIC Program* (2012)

Data	Sources	
Health Insurance	North Bay Business Journal, Book of Lists, Kaiser Permanente (2011)	
	U.S. Census Bureau, *2010 ACS 1-Year Estimate*, Table DP03 Selected Economic Characteristics	
	California Dept. of Health Care Services, *Medi-Cal Managed Care Enrollment Reports* (July 2011)	
	Centers for Medicare and Medicaid Services, *Medicare Enrollment Report* (July 2010)	
	Centers for Medicare and Medicaid Services, *Medicare Advantage/Part D Contract and Enrolment Data* (2009)	
	County Medical Services Program, *CMSP Eligibility Sonoma County by Aid Code by Month, FY 2009-2010*	
Leading Health Indicators		
Leading Causes of Death	California Dept. of Public Health, *County Health Status Profiles 2012*; U.S. Dept. of Health and Human Services, *Healthy People 2020*	
	Cancer	California Dept. of Public Health, *California Cancer Registry*; U.S. Dept. of Health and Human Services, *Healthy People 2020*
	Chronic Lower Respiratory Disease	California Dept. of Public Health, *County Health Status Profiles 2012*
	Leading Causes of Death by Age Group	California Dept. of Public Health, *Death Statistical Master Files* (2008-2010)
Years of Potential Life Lost	California Dept. of Public Health, *Death Statistical Master Files* (2007-2009) (age adjusted)	
Disability by Age Group	U.S. Census Bureau, *2008-2010 ACS 3-Year Estimates*, Table S1810 Disability Characteristics	
Disparities in Health	California Dept. of Public Health, *Death Statistical Master Files* (2005-2009)	
	St. Joseph Health, *Behavioral Risk Factor Surveillance System*	
Children: Prenatal Period to 1 Year	California Dept. of Public Health, *Death Statistical Master Files* (2008-2010)	
	California Dept. of Public Health, *EPICenter: California Injury Data Online*, Overall Injury Surveillance	
	California Dept. of Public Health, *Birth Statistical Master Files*; *Death Statistical Master Files*, (2008-2010)	
	California Dept. of Public Health, *Maternal and Infant Health Assessment (MIHA) Survey* (2010)	
	California Dept. of Public Health, *In-Hospital Breastfeeding Initiation Data* (2010)	
	California Dept. of Social Services / Univ. of California at Berkeley, *Child Welfare*	

Data	Sources
	Dynamic Report System, Single Time Period Table (2010)
	California Dept. of Public Health, *MIHA Snapshot*, Sonoma County (2010)
Children: 1 to 12 Years	California Dept. of Public Health, *EPICenter: California Injury Data Online*
	California Dept. of Public Health, *Asthma Data Query*
	California Dept. of Education, *DataQuest*; *STAR Testing*; *Physical Fitness Testing*
	California Dept. of Education, *DataQuest*; *Physical Fitness Testing*
	St. Joseph Health, *Behavioral Risk Factor Surveillance System*
Children: 13-17 Years	California Dept. of Public Health, *EPICenter: California Injury Data Online*
	California Dept. of Education, *DataQuest*; *Physical Fitness Testing*
	California Dept. of Education, *DataQuest*; *Student & School Data Files*
Adults: 18-59 Years	California Dept. of Public Health, *EPICenter: California Injury Data Online*
	St. Joseph Health, *Behavioral Risk Factor Surveillance System*
	The Commonwealth Fund Common, *Scorecard on Local Health System Performance, 2012*
	UCLA Center for Policy Research, *California Health Interview Survey* (2009)
Adults: 60 Years and Over	California Dept. of Public Health, *EPICenter: California Injury Data Online*
	UCLA Center for Policy Research, *California Health Interview Survey* (2009)
	U.S. Census Bureau, *2006-2010 ACS Estimates*
	California Dept. of Public Health, *Death Statistical Master Files*
Health System Performance Indicators	California Office of Statewide Health Planning and Development, *AHRQ-Prevention Quality Indicators*, Patient Discharge Data (2009)
	The Commonwealth Fund, *Scorecard on Local Health System Performance, 2012*
	The Commonwealth Fund, *State Scorecard of Child Health System Performance, 2011*

V. DEMOGRAPHICS AND LEADING HEALTH INDICATORS

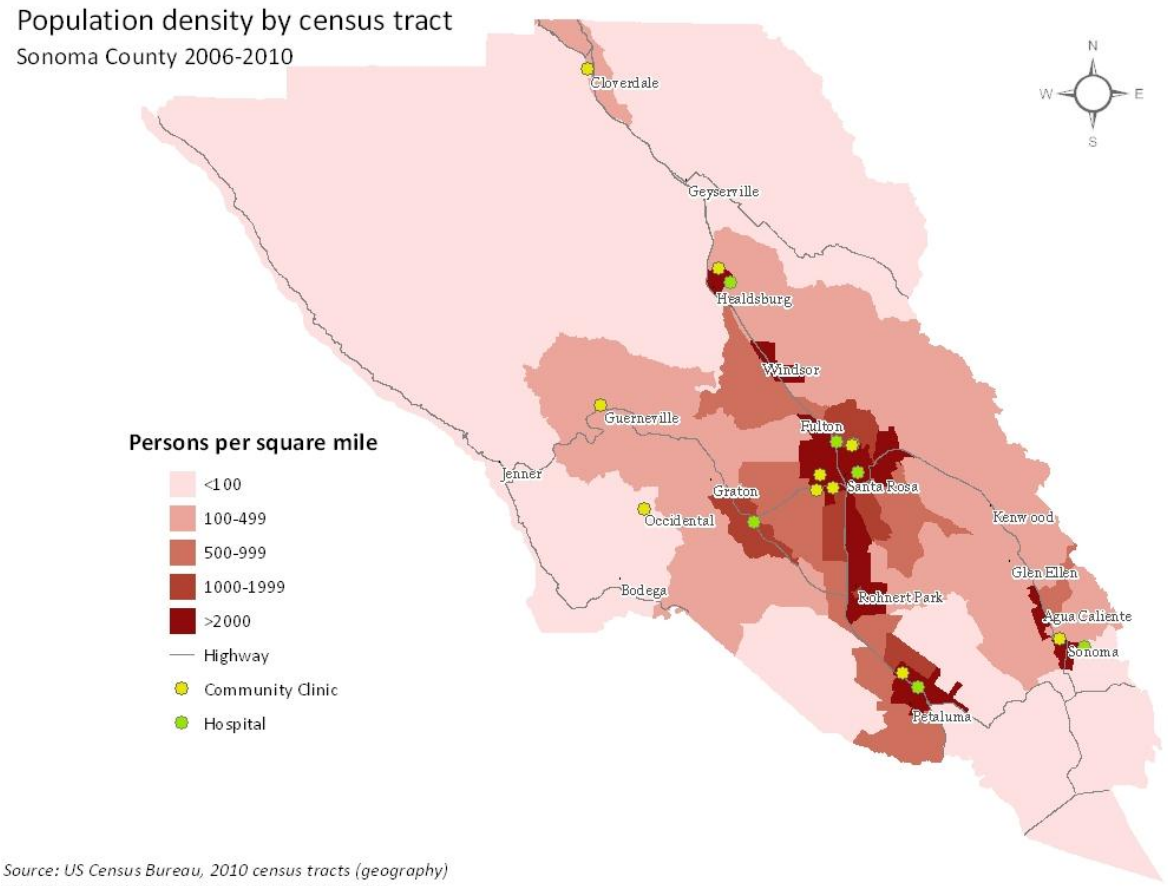
A. Geography, Demographics, and Socio-Economic Data

Demographic Overview

Sonoma County is a large, urban-rural county encompassing 1,575 square miles. The county's total population is currently estimated at 487,011. According to projections from the California Department of Finance, county population is projected to grow by 8.3% to 546,204 in 2020. This rate of growth is less than that projected for California as a whole (10.1%).

Geographic Distribution of Population

Sonoma County residents inhabit nine cities and a large unincorporated area, including many geographically isolated communities. The majority of the county's population resides within its cities, the largest of which are clustered along the Highway 101 corridor. Santa Rosa is the largest city with a population of 168,841 and is the service hub for the entire county and the location of the county's three major hospitals.



Source: US Census Bureau, 2010 census tracts (geography) and ACS 5 year estimates 2006- 2010 (population)

Since 2006, the county population has grown at an overall rate of 1.8% with the cities of Sonoma, Santa Rosa and Windsor experiencing the fastest growth rates.

Sonoma County population by city, 2006 and 2012	2006		2012		% Change 2006-2012
	N	%	N	%	
Sonoma	478,222	100.0%	487,011	100.0%	1.8%
Cloverdale	8,435	1.8%	8,629	1.8%	2.3%
Cotati	7,367	1.5%	7,276	1.5%	-1.2%

Sonoma County population by city, 2006 and 2012	2006		2012		% Change 2006-2012
	N	%	N	%	
Healdsburg	11,680	2.4%	11,442	2.3%	-2.0%
Petaluma	56,608	11.8%	58,165	11.9%	2.8%
Rohnert Park	42,937	9.0%	40,846	8.4%	-4.9%
Santa Rosa	156,820	32.8%	168,841	34.7%	7.7%
Sebastopol	7,737	1.6%	7,405	1.5%	-4.3%
Sonoma	9,873	2.1%	10,665	2.2%	8.0%
Windsor	25,957	5.4%	27,003	5.5%	4.0%
Unincorporated	150,808	31.5%	146,739	30.1%	-2.7%

Source: California Dept. of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State* (2011-2012).

Sonoma County's unincorporated areas are home to 146,739 residents, 30.1% of the total population. A significant number of these individuals live in locations that are very rural and geographically remote. Residents of these areas may experience social isolation and significant barriers in accessing basic services and supports such as transportation, health care, nutritious food and opportunities to socialize. Low-income and senior populations living in remote areas may face special challenges in maintaining health and quality of life. Of the county's total senior population, age 60 and older, 12,144 (12%) are considered "geographically isolated" as defined by the Older Americans Act. *(Source:* California Dept. of Aging, *California Aging Population Demographic Projections for Intrastate Funding Formula* (2011)*)*

Race and Ethnicity

White, Non-Hispanics currently represent 64.2% of the county's population while Hispanics account for 25.6%. Other ethnic groups include: Asian/Pacific Islander (5.2%), African Americans (1.7%), American Indians (1.0%), and persons reporting two or more races (2.3%). While the county's population is less diverse than that of California as a whole, this is changing. By 2020, Sonoma's Hispanic population, currently estimated at 129,057, is expected to grow to 168,290 and account for 31% of the total population. Other ethnic groups are projected to experience less dramatic growth. *(Source:* California Dept. of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State* (2011-2012)*)*

While the majority of the county's ethnic populations are English-proficient, the 2010 Census estimates that 50,236 residents, age 5 and older, or 11.26% of total population, are "linguistically isolated" i.e., speaking a language other than English at home and speaking English less than "very well."

Age and Gender

Sonoma County is slightly older than California as a whole, with a median age of 39.50 years, as compared with 34.90 years. Sonoma County seniors, age 60 and over, represent 20.4% of the total population as compared with a statewide figure of 16.9%. Of note is the disparity in age between the county's older White population and its more youthful Hispanic population. Over 30% of Sonoma County Hispanics are age 12 and under, as compared to 12% for Whites. At the other end of the spectrum, 26.6% of Whites are seniors (age 60 and above) as compared with 7.1% of Hispanics.

2012 Population Sonoma County

Age	White, Non Hispanic %	Hispanic %	Pac. Islander / Asian %	African American %	American Indian %	Multi Racial %	Total %
Less < 1	1.0%	2.1%	1.5%	1.3%	1.0%	1.5%	1.3%
1 - 12	11.1%	28.7%	16.4%	16.0%	11.2%	28.0%	16.4%
13 - 17	5.0%	10.1%	6.6%	7.9%	6.1%	9.3%	6.5%
18 - 59	56.3%	51.9%	60.0%	62.0%	63.7%	49.7%	55.4%
60+	26.6%	7.1%	15.5%	12.7%	17.9%	11.6%	20.4%
TOTAL	100%	100%	100%	100%	100%	100%	100%

Source: California Dept. of Finance, *E-5 Population and Housing Estimates for Cities, Counties, and the State* (2011-2012)

Seniors are the county's fastest growing population age group. This population is projected to grow from 102,639 in 2012 to 128,589 in 2020, with the greatest growth in the 70-74 age group the baby boom "age wave". This age wave, combined with increased longevity, will continue to drive growth in senior populations, especially in the 75 and over age group. Seniors age 75 and over currently represent about 9% of the total population at 44,813. Females significantly outnumber males in this age group (62%/38%).

Life Expectancy

Average life expectancy in Sonoma County is currently 80.6 years with considerable variation by population sub-groups. Females average 82.1 years while males average 78.4 years. Hispanic life expectancy (91.0 years) significantly exceeds that of Whites (79.9 years). Life expectancy also varies significantly by neighborhood poverty level. Neighborhoods with less than 5% of residents living in poverty experience lower mortality than neighborhoods with a population (in poverty) greater than 15%.

Births

In 2010, Sonoma County reported 5,391 live births. Of these, 42.2% were to Hispanic mothers and 47.5% were to Non-Hispanic White mothers. Sonoma County's birth rate is lower than the

statewide rate and has dropped from 12.1 live births per 100,000 population in 2000-2002 to 11.4 in 2008-2010. During this period, White births have declined 12.2% and the Hispanic birth rate has declined 13.0%. (*Source:* California Dept. of Public Health, *Birth Statistical Master Files* (2010); California Dept. of Public Health, *Vital Statistics Query)*

Birth by Ethnicity, Sonoma County and California 2010	Sonoma County		California	
	N	%	N	%
White, Non Hispanic	2559	47.5%	149,922	29.4%
Hispanic	2277	42.2%	257,269	50.4%
Asian / Pacific Islander	227	4.2%	62,889	12.3%
African American	67	1.2%	27,704	5.4%
American Indian	49	0.9%	1,910	0.4%
Two or more Races	117	2.0%	10,285	2.0%
TOTAL	5391	100%	509,979	100%

Source: CA. Dept. of Public Health, Birth Statistical Master Files (2010); *CA. Dept. of Public Health, Vital Statistics Query*

Educational Attainment

Educational attainment rates in Sonoma County exceed national averages. Levels of attainment, a key determinant of both income and health, vary modestly by gender but significantly by ethnicity, with Hispanics currently lagging behind their White counterparts in attainment at all levels. Just over 6% of Whites do not have a high school diploma as compared with 45.9% of the Hispanic population.

Educational Attainment by Gender and Race/Ethnicity for Population 25 years and older, Sonoma County

Educational Attainment	Total %	Male %	Female %	White %	Hispanic %
< High School (HS) Diploma	13.8%	15.8%	12.0%	6.1%	45.9%
At Least a HS Diploma	86.2%	84.2%	88.0%	93.9%	54.1%
At Least a Bachelors Degree	31.5%	31.4%	31.5%	36.5%	9.9%
Graduate or Professional Degree	11.1%	11.4%	10.8%	N/A	N/A

Source: *U.S. Census Bureau, 2006-2010 ACS 5-Year Estimates,* Table S1501 Educational Attainment; Table C15002H Sex by Educational Attainment for the Population 25 Years and Over (White Alone, Not Hispanic or Latino); Table C15002I Sex by Educational Attainment for the Population 25 Years and Over (Hispanic or Latino)

Employment

During the 2006-2010 period, 233,182 Sonoma County residents were employed full or part-time, representing 66.4% of the county's total population age 16 and over. The county's

principal employment sectors, in order by estimated workforce size, are: government and public education (28,000); educational and health services (24,000); professional and business services (22,000); retail (22,000); manufacturing (20,000); leisure and hospitality (19,000); construction (9,000); and agriculture (6,000). Median hourly wages range from under $15/hour for food services and general sales workers to over $50/hour for legal, computer and management workers. *(Source:* Sonoma County Economic Development Board, *Sonoma County Indicators* (2012) (abridged)*)*

Employment in the county has decreased by 10.3% since the fourth quarter of 2008. The Sonoma County Economic Development Board estimates that, between 2007 and 2011, over 22,000 jobs have been lost in the recession. According to the State Employment Development Department, Sonoma County's unemployment rate in September 2012 was 7.6%, below the California average (10.2%).

Summary of Employment status for the population 16 and over, Sonoma County (2006-2010)	**Sonoma County**	
	Estimate	**Percent**
Population 16 years and over (full and part time employment)	381,234	100%
Civilian labor force	253,109	66.4%
Employed	233,182	61.2%
Unemployed	19,927	5.2%
Source: U.S. Census Bureau, *2006-2010 ACS 5-year Estimates,* Table DP03 Selected Economic Characteristics		

Income and Wealth

From 2006-2010, the median income of Sonoma County's 184,000 households was $63,274, slightly higher than the California average. During this period, 17.7% of Sonoma County households had incomes of less than $25,000. At the upper end of the scale, 28% of households earned over $100,000 annually. The impact of the recession on income and wealth has been significant. While local data are not available, a national survey of consumer finance showed that, between 2007 and 2010, the median net worth of American families plunged more than 38 %. *(Source:* Board of Governors of the Federal Reserve System, *Survey of Consumer Finances* (2010).

Household income (2010 inflation-adjusted dollars), Sonoma County	Sonoma County	
	Estimate	Percent
< $25,000	32,660	17.7%
$25,000 - $74,999	73,998	40.2%
$75,000 - $99,999	25,851	14.0%
$100,000 - $199,999	41,067	22.3%
$200,000 or more	10,457	5.7%
Median household income (dollars)	63,674	N/A
Source: U.S. Census Bureau, *2006-2010 ACS 5-year Estimates,* Table DP03 Selected Economic Characteristics		

Income status varies significantly by gender. During 2006-2010, median income for Sonoma County males was $44,973 as compared with $31,960 for females. This differential expands with educational attainment; median income for males with graduate degrees ($85,470) was significantly higher than for females at the same educational level ($55,272). *Source:* U.S. Census Bureau, *2006-2010 ACS* (reported in 2010 inflation adjusted dollars)*)*

Sonoma County household incomes also vary significantly by both educational attainment and ethnicity. 80% of Sonoma County households with graduate education earned above $66,150 annually as compared with only 42.9% of households with high school or less education. And, while 68.6% of White, non-Hispanics had annual household income in excess of $66,150 only 34.5% of Hispanics did. (*Source:* U.S. Census Bureau, *2010 ACS 1-Year Estimate)*

Poverty

While many Sonoma County residents enjoy financial security, 10.27% of county residents reported annual incomes below Federal Poverty Level in 2010. The 2010 Federal Poverty Level (FPL) was $10,830 in annual income for an individual or $22,050 for a family of four. The Federal Poverty Guidelines are not scaled to reflect significant regional variations in the cost of living. Given the high cost of living in Sonoma County, it is generally accepted that an annual income under 200% of FPL ($21,660 for an individual) is inadequate to meet basic needs for food, clothing, shelter, transportation, health care and other necessities.

Poverty rates vary significantly by ethnicity. Significant disparities exist, especially for Sonoma County Hispanics, who experience a much higher rate of poverty (21.8%) than Whites or Asians.

Percent below federal poverty level, Sonoma County	N	%
White, non-Hispanic	31,881	10%
Hispanic	25,816	21.8%
Asian	2,511	12.8%

Percent below federal poverty level, Sonoma County	N	%
American Indian	797	10.7%
Two or more races	1,268	9.3%
Source: U.S. Census Bureau, *ACS 5 year estimates 2006-2010*		

The county's youngest residents are most significantly impacted by poverty, with nearly 17% of children under age 6 living below 100% Federal Poverty Level. Among Sonoma County seniors age 75 and over, over 2,000 live in households with household income below 100% FPL and an additional 6,000 have income under 200% of FPL.

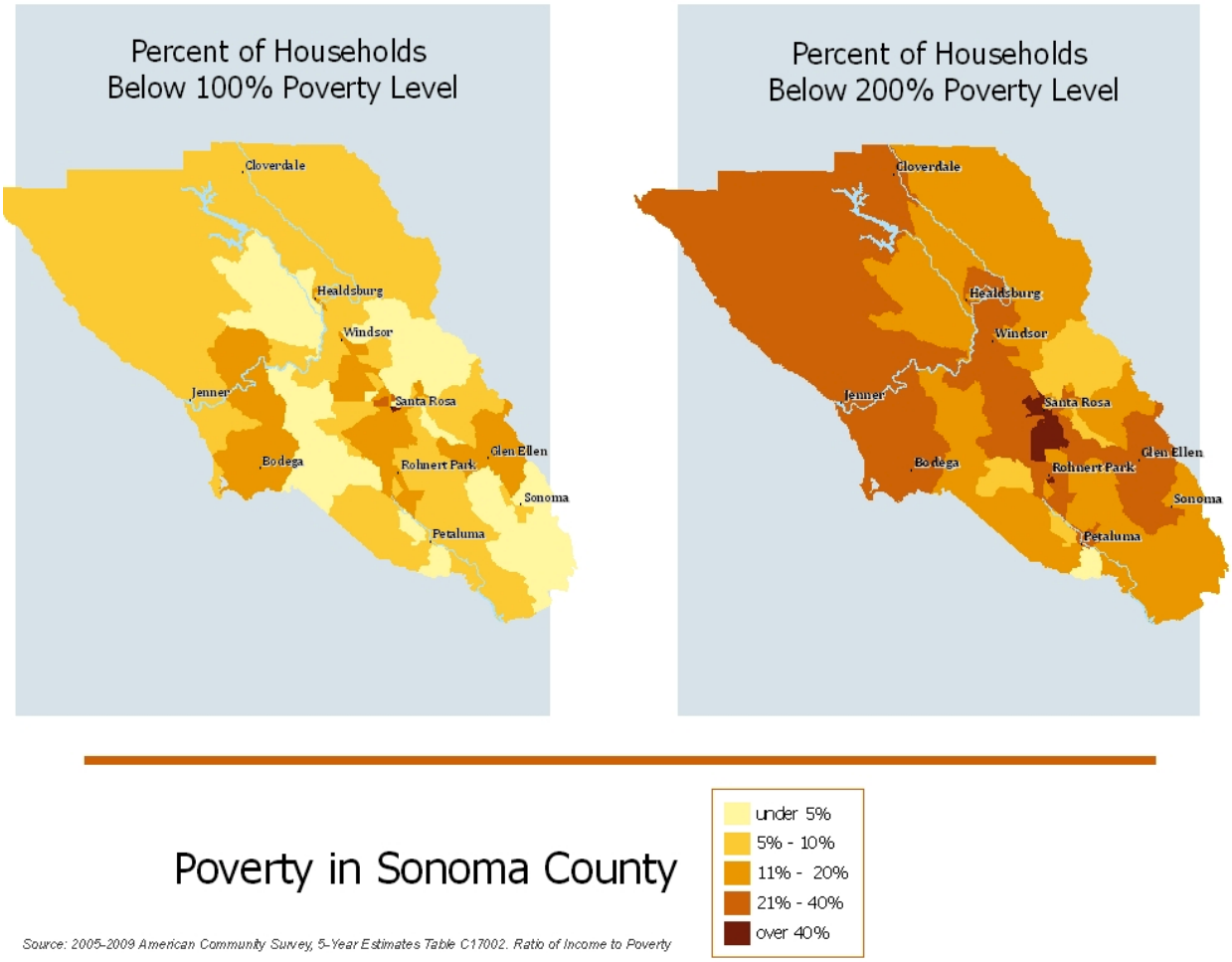
Ratio of poverty to income by age, Sonoma County		< FPL (100%)	100-299% FPL	300-499% FPL	500+% FPL
Age	**Estimate**	**< $22,050**	**$22,050 - $65,929**	**$66,150 - $110,030**	**$110,250+**
<18 yrs	103,883	12.8%	37.4%	26.5%	25.3%
18-64 yrs	301,274	10.3%	27.7%	23.6%	36.7%
65+ yrs	62,172	5.8%	34.1%	24.5%	35.6%
Source: U.S. Census Bureau, *2006-2010 ACS 5-Year Estimates,* Table B17024 Age by Ratio of Income to Poverty Level in Past 12 Months					

Poverty status is also linked to family configuration. Among an estimated 116,699 Sonoma County families, those of married couples experience the lowest poverty rates (3.8%). The families of single, female householders experience the highest rates, with significant disparity by ethnicity. Among Hispanic families with a female single head-of-household, 29.2% are living below FPL as compared with 12.5% for Whites in this category. Among seniors, those who are married have a lower poverty rate (1.9%) than do female seniors living as single, heads-of-household (2.4%).

Poverty Status in the Past 12 months of Families, Sonoma County	All families		Married couple families		Female householder, no husband present	
	Estimate	% < FPL	Estimate	% < FPL	Estimate	% < FPL
Families	116,699	6.3%	88,656	3.8%	18,622	16.9%
With related children < 18 years	57,144	9.8%	39,655	5.7%	12,054	21.7%
White, non-Hispanic	85,098	3.9%	66,500	2.1%	12,768	12.5%
Hispanic origin	22,833	13.7%	15,833	9.7%	4,222	29.2%
Householder worked	89,821	5.1%	67,554	3.1%	14,453	13.5%
Householder worked FT year round in past 12 months	56,376	2.1%	43,092	1.8%	8,091	3.2%

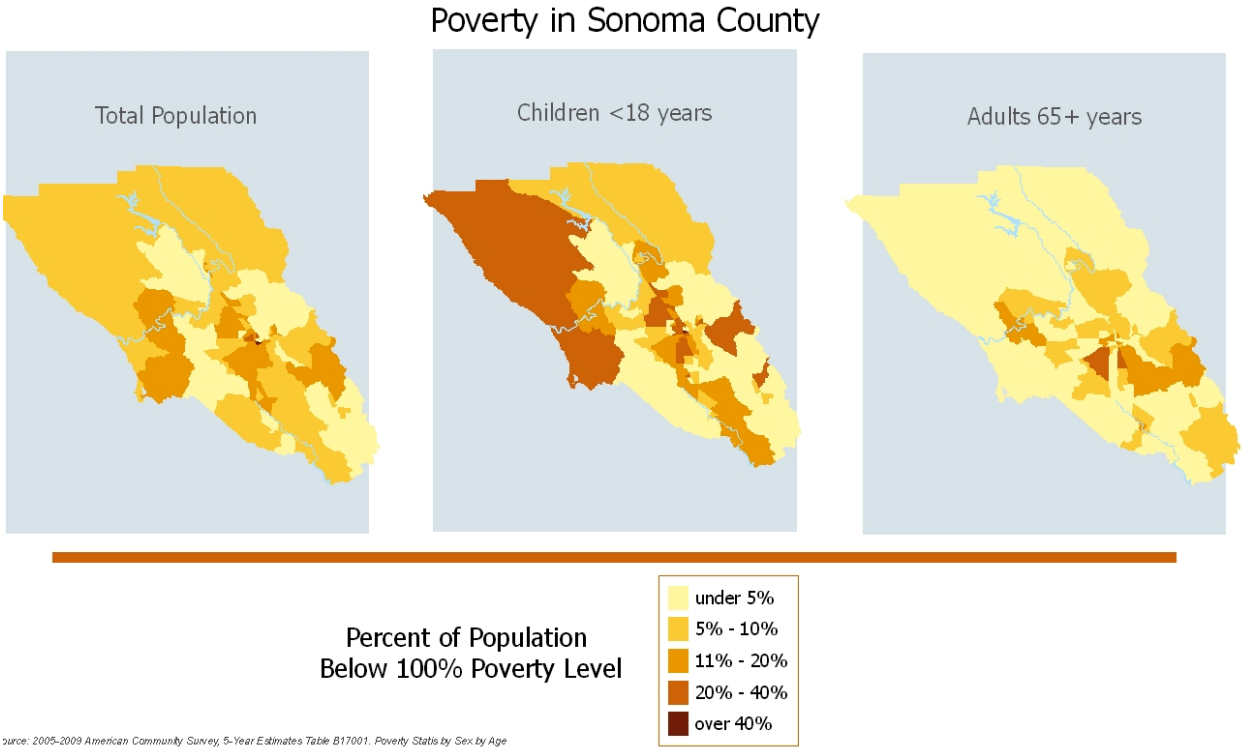
Poverty Status in the Past 12 months of Families, Sonoma County	All families		Married couple families		Female householder, no husband present	
	Estimate	% < FPL	Estimate	% < FPL	Estimate	% < FPL
Householder 65+ years	19,140	2.1%	15,981	1.9%	2,351	2.4%
Mean income deficit for families (dollars)	$8,134	N/A	$8,140	N/A	$8,901	N/A
Source: U.S. Census Bureau, *2006-2010 ACS 5-Year estimates,* Table S1702 Poverty Status in the Past 12 Months of Families						

Sonoma County's poorest residents are dispersed throughout the region. Areas with the highest percentage of low-income residents are displayed in the two maps below.



In some parts of Southwest Santa Rosa, the Russian River corridor, Sonoma Valley and unincorporated areas in the northwest and northeast, poverty rates for children under age 18 exceed 40%. Based on neighborhood conditions, residents in these communities may have limited access to safe places to play, safe routes to walk and bike to school, grocery stores that offer affordable, fresh fruits and vegetables or prevention-focused health and dental services.

The county's lowest income senior populations are clustered around Santa Rosa, the Sonoma Valley and the Russian River. Similarly, low-income seniors may face barriers in accessing affordable transportation, nutritious food, safe places to exercise and opportunities to socialize with others.



Housing

Sonoma County continues to be an expensive place to live with housing costs among the highest in the nation. Despite this, home ownership rates are higher in Sonoma County than in California as a whole, with 62.4% of homes owner-occupied, as compared with a statewide rate of 57.4%. Significant ethnic disparities exist, however. Over 83% of homeowners are White, non-Hispanic while fewer than 11% of homeowners are Hispanics. This disparity is greater than for California as a whole, where 21.6% of homeowners are Hispanic.

Housing characteristics, Sonoma County and California	Sonoma County %	California %
Owner occupied	62.4%	57.4%
White, non-Hispanic	83.6%	59.8%
Hispanic	10.7%	21.6%
Other races	4.8%	17.5%
Renter occupied	37.6%	42.6%
White, non-Hispanic	69.5%	42.3%
Hispanic	22.3%	33.5%
Other races	7.0%	22.7%

Housing characteristics, Sonoma County and California	Sonoma County %	California %
Gross rent ≥30 of household income	55.8%	55.1%
Source: U.S. Census Bureau, *2006-2010 ACS 5-Year Estimates,* Table DP04 Selected Housing Characteristics; Table S2502 Demographic Characteristics for Occupied Housing Units		

Approximately 10% of Sonoma County residents (50,670) live alone. Among seniors aged 65 and older, 30% live alone, representing 38.4% of the women and 18.9% of the men in this age group. While data on residency in institutional settings is not available, Sonoma County skilled nursing facilities are currently licensed for 1,684 beds; residential care and assisted living facilities are licensed for 3,052 beds. The 2011 Homeless Census and Survey counted 4,539 individuals as homeless in Sonoma County. *(Source:* Sonoma County Task Force for the Homeless, *Sonoma County Homeless Census and Survey* (2011).

Food Security

Food security is commonly defined as including both physical and economic access to food that meets people's dietary needs as well as their food preferences. Data from the 2009 California Health Interview Survey indicate that an estimated 51,000 Sonoma County adults (50.5%) with incomes 200% or less of FPL were not able to afford enough food (food insecure).

In 2010, the Redwood Empire Food Bank (REFB) reported that the number of food insecure people in the county was continuing to grow as evidenced by a 20% increase in the number of people seeking emergency food assistance in each of the preceding two years. REFB reports that 61% of its food recipients live at or below the federal poverty level.

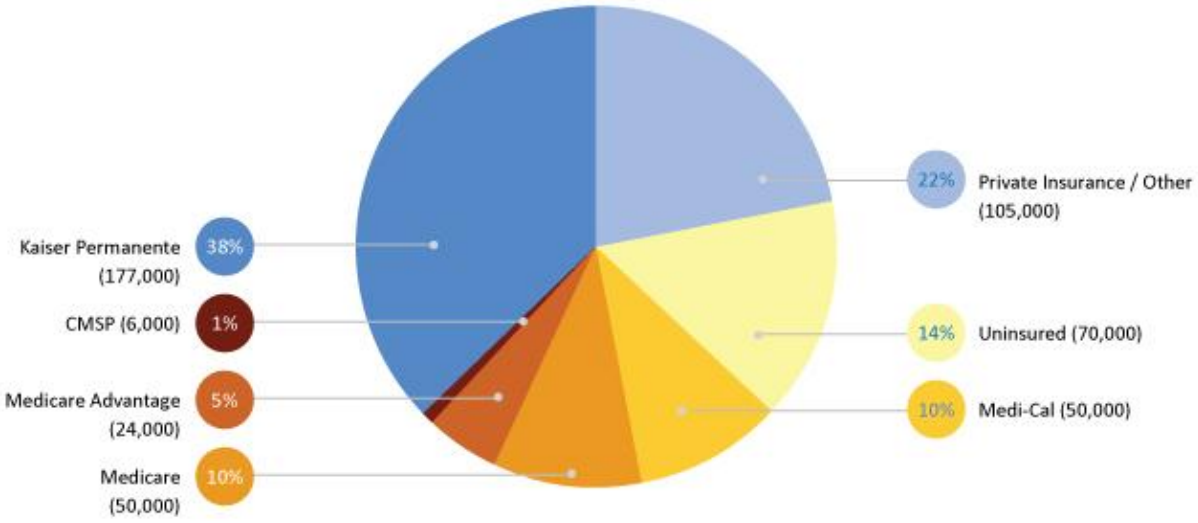
In addition to the Redwood Empire Food Bank and its network of food pantries, a number of food assistance and charitable feeding programs focus on alleviating hunger and food insecurity for both adults and children. These programs include the federal food stamp program (CalFresh in California), the National School Lunch and School Breakfast Program, the special supplemental program for Women, Infants and Children (WIC), and various nutrition and meal programs for low income seniors. However, enrollment in these programs is consistently lower than necessary to ensure community-wide food security for children and families. For example, an estimated 54,165 Sonoma County residents were eligible for the Cal Fresh Program (formerly the Food Stamp Program) in 2010. A majority of these (63%) were not enrolled. The 2010 Sonoma County Nutrition Profile reports that 12% of the 21,362 eligible children did not enroll in the National School Lunch Program. As of June 2012, 27,686 children were eligible for free and reduced priced meals through this program, approximately 40% of all children enrolled in Sonoma County public schools. Data on the number of children participating in 2012 is not yet available. Similarly, in 2012, while 2,251 low-income pregnant women were eligible for food assistance through the Sonoma County Women, Infants and Children (WIC) Program, nearly 20% did not enroll. *(Sources:* Sonoma County Dept. of Health Services, *Sonoma County Community Food*

Assessment (July 2011); California Food Policy Advocates, *2010 Survey*; Sonoma County Dept, of Health Services, *WIC Program* (2012)

Health Insurance

Sonoma County residents obtain health insurance through a variety of public and private plans. Of those who have some type of health insurance, approximately 68% are covered through private insurance plans while another 32% are covered through publicly funded programs such as Medi-Cal and Medicare. The majority of private plan enrollees obtain coverage through employer-sponsored programs. As has occurred nationally, the recession has forced many local employers to reduce workforce size and/or to scale back or discontinue the provision of health insurance benefits to employees.

Health Insurance of the population of Sonoma County by Payor 2010 (Estimates)



Data Sources:

North Bay Business Journal, *Book of Lists*, Kaiser Permanente (2011)

U.S. Census Bureau, *2010 ACS 1-Year Estimate*, Table DP03 Selected Economic Characteristics

California Dept. of Health Care Services, *Medi-Cal Managed Care Enrollment Reports* (July 2011)

Centers for Medicare and Medicaid Services, *Medicare Enrollment Report* (July 2010)

Centers for Medicare and Medicaid Services, *Medicare Advantage/Part D Contract and Enrolment Data* (2009)

County Medical Services Program, *CMSP Eligibility Sonoma County by Aid Code by Month, FY 2009-2010*

According to estimates compiled by the Sonoma County Department of Health Services, approximately 70,000 individuals (14% of total population) are currently uninsured for health care. Some individuals who have health care coverage are considered “underinsured”. This means they lack access to basic health care services such as dental, mental health or specialty care because their insurance does not cover needed services or does not pay at a level that local providers will accept. Estimates of this population are not available.

Passage of the Affordable Care Act (ACA) will have significant positive impact on un and underinsured populations in Sonoma County, increasing coverage in both private and public plans, as projected in the table below. Based on these projections, the ACA will reduce the number of uninsured in Sonoma County from 70,000 to 20,000 individuals and expand Medi-Cal by approximately 30,000 new enrollees.

Health Insurance before and after reform, Sonoma County		
Insurance	**Before Reform 2010 %**	**After Reform 2014 %**
Private	60%	65%
Uninsured	14%	4%
Medicare	15%	15%
Medi-Cal	10%	16%
CMSP	1%	0%
Source: See Data Source Table and Reform Data per Rod Stroud		

B. Leading Health Indicators: Profile of Leading Health Indicators

Introduction

The Profile of Leading Health Indicators contains high-level summary data, derived from local and state sources, highlighting major health conditions or events that compromise the health and healthy development of children and contribute most prominently to illness and injury, disability and death for Sonoma County adults and children. The Profile begins with population-wide data on leading causes of death by total population and by age group. Data on the burden of premature death are presented, as is information on types of disability by age.

Following this overview, leading health indicators are presented within a framework of five age range categories: children pre-natal up to age 1; children 1 to 12 years; children 13 to 17 years; adults 18 to 59 years and; adults 60 years and over. Some data are presented that do not align exactly with these ranges in order to capture key indicators of morbidity and mortality.

Within each age category, leading causes of death are highlighted. Information on significant causes of morbidity is also presented, along with data on risk factors and behaviors that contribute to morbidity. Where it is helpful to understanding conditions of morbidity, hospitalization data are included. It should be noted that children in all age categories experience death and hospitalization at far lower rates than adults. For this reason, indicators of health and healthy development are likely to be more meaningful than data on deaths and hospitalization when seeking insight into children's overall health status.

When available, comparative information on how Sonoma County measures against California rates, Healthy People 2020 goals and Health Action Sonoma goals is also displayed. Where local indicators are significantly worse than California or do not meet Healthy People 2020 targets, they are highlighted. Disparities in health status, health risk behaviors and access to care related to social determinants such as income and educational attainment are also highlighted.

The last section of the Profile presents information on health system performance, comparing Sonoma County indicators to state and national benchmarks. Information on preventable hospitalization is provided along with selected indicators of health system effectiveness for both adults and children.

Leading Causes of Death

The two tables below summarize leading causes of death for all age groups in Sonoma County.

Highlights:

- Sonoma County significantly exceeds California averages for cancer, stoke, chronic lower respiratory disease, Alzheimer's disease, unintentional injuries, suicide and chronic liver disease deaths.
- Sonoma County does not meet Healthy People 2020 targets for cancer, coronary health disease, stroke or suicide.

TABLE 1. Death rates* from leading causes of death, Sonoma County and California 2008-2010 with Healthy People 2020 Objectives

Cause of Death	Sonoma County	CA	HP 2020
Cancer	180	151.7	160.6
Coronary heart disease	116.8	121.6	100.8
Stroke	47.5	37.4	33.8
Chronic lower respiratory disease	44	36.7	**
Alzheimer's disease	44	28.2	NA
Unintentional injuries	31.1	27.1	36
Diabetes	16.5	19.5	NA
Suicide	14	9.7	10.2
Pneumonia and influenza	13.3	17.2	NA
Chronic liver disease and cirrhosis	11.4	10.8	NA

	BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.

Source: California Dept. of Public Health, *County Health Status Profiles 2012*; California Dept. of Public Health, *California Cancer Registry*
*Age adjusted per 100,000 **HP2020 objective is for adults 45+ years (98.5)

Cancer: Lung cancer, with 234 annual deaths, is the leading cause of cancer death, exceeding the state average. Other leading causes are colorectal cancer (84 deaths), female breast cancer (80) and prostate cancer (53), all of which are higher than the California rate and do not meet Healthy People 2020 targets. Males have slightly higher rates of lung cancer while females have slightly higher rates of colorectal cancer. With the exception of stomach cancer, Sonoma County's incidence rate – the number of new cases reported - for all cancers (all ages) is higher than the California rate. Cancers with highest incidence rates are breast cancer and prostate cancer. (Source: California Dept. of Public Health, *California Cancer Registry*; California Dept. of Public Health, *California Cancer Registry*)

Chronic Lower Respiratory Disease: Individuals age 65 and older are those most affected by Chronic Lower Respiratory Disease, predominantly emphysema. Death rates are 230.2/100,000 for the 65-85 age group and 877.6/100,000 for those over 85, as compared with 16.8/100,000 for those 45-64 years. *(Source:* California Dept. of Public Health, *County Health Status Profiles 2012)*

Leading Causes of Death by Age Group

Highlights:

- Cancer, heart disease and unintentional injuries are the leading causes of death for adults, together representing 50% of all adult deaths.
- Unintentional injuries are the leading cause of death for children ages 1–17, representing 21% of deaths in the 1-12 age range and 28% in the 13-17 age range.

Table 2. Leading Causes of death by age category, Sonoma County 2008-2010 (3-year totals)

Age	#	Cause 1	Cause 2	Cause 3
< 1	**71**	**52%** Conditions originating in perinatal period	**21%** Congenital anomalies	**4%** Unintentional injuries
1-12	**28**	**21%** Unintentional injuries	**14%** Cancer	**14%** Diseases of nervous system
13-17	**18**	**28%** Unintentional injuries	**17%** Cancer	**17%** Diseases of nervous system
18-59	**1796**	**29%** Cancer	**15%** Unintentional injuries	**10%** Coronary heart disease
60+	**9555**	**24%** Cancer	**18%** Coronary heart disease	**8%** Stroke

Source: California Dept. of Public Health, *Death Statistical Master Files* (2008-2010)

Years of Potential Life Lost

Years of potential life lost before age 75 (YPLL-75) are those years lost when a person dies prematurely, such as from preventable disease or unintentional injury. YPLL-75 calculations assume all people would naturally live to age 75. Diseases or events that lead to disproportionate mortality in younger age groups and those that affect large numbers of people have higher YPLL-75 values and represent a greater burden of disease and injury.

Highlights:

- The leading causes of YPLL-75 for the Sonoma County population as a whole are cancer and unintentional injury.
- YPLL values for cancer are similar for men and women but are significantly higher for White non-Hispanics than for Hispanics.
- YPLL values for unintentional injury are significantly higher for males than for females and slightly higher for White, non-Hispanics than for Hispanics.

Table 3. Years Of Potential Life Lost*(Ypll-75) Per 1000 Population, Sonoma County 2007-09

Cause of Life Lost	Total Population	Male	Female	White, Non Hispanic	Hispanic
All Causes	49.99	62.39	37.63	40.29	40.29
Cancer	12.2	12.56	11.85	13.12	9.03
Unintentional Injuries	8.24	11.49	4.85	9.04	7.03
Coronary Heart Disease	4.46	6.75	2.29	4.62	3.27
Diabetes	1.11	1.42	0.67	0.99	1.64
Stroke	1.04	0.96	1.1	0.95	0.88
Chronic Lower Respiratory Diseases	1.01	1.04	1	1.07	0.6
Source: California Dept. of Public Health, *Death Statistical Master Files* (2007-2009) / *Age-adjusted					

Disability by Age Group

About 10% of Sonoma County residents report having one or more disabilities. Conditions of disability are most prominent in older age groups, especially in the over-65 population. Ambulatory disabilities are most common except in the 5-17 age group.

- Over 22,000 Sonoma County seniors over age 65 reports having one or more disability.
- Over 10,000 seniors in this age group report a disability that interferes with living independently.

Table 4. Disability characteristics by age and disability type, Sonoma County

Age	Total Pop.	Any Disability	Hearing	Vision	Cognitive	Ambulatory	Self-care	Independent living
Total	**475,034**	**10.7%**	**3.5%**	**1.9%**	**4.0%**	**5.5%**	**2.6%**	**4.3%**
< 5	28,124	1.5%	1.2%	0.6%	N/A	N/A	N/A	N/A
5-17	76,998	4.2%	0.7%	1.0%	2.4%	0.7%	1.2%	N/A
18-64	305,544	8.1%	2.0%	1.4%	3.6%	3.8%	1.8%	3.4%
65	64,368	35.1%	15.3%	5.8%	9.5%	21.6%	9.4%	16.1%

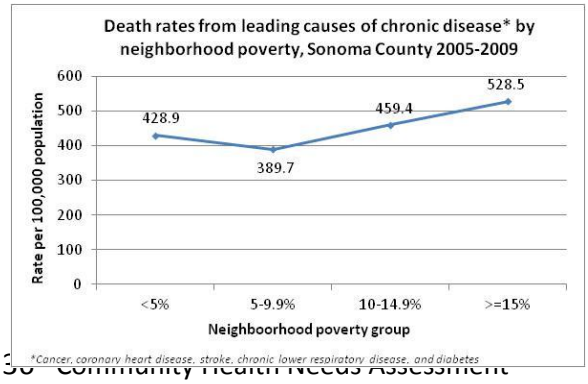
Source: U.S. Census Bureau, *ACS 2008-2010 3 year estimates,* Table S1810

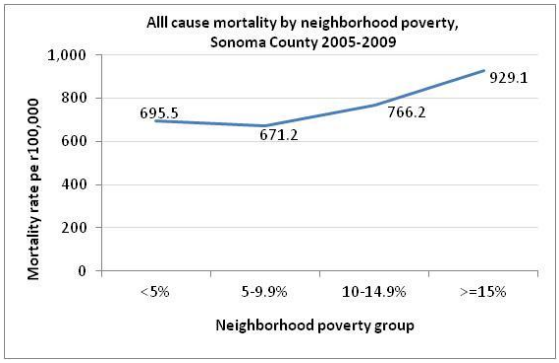
Disparities in Health

While differences in the health of individuals can be attributed to a multiplicity of causes – heredity, environmental factors, health behaviors, access to medical care and others - socio-economic factors such as income, educational attainment and racism are recognized as powerful "social determinants" of population health. Disequities in income and education, for example, have been found to drive inequalities in access to health care and disparities in health status among population sub-groups. Disparities in health outcomes related to social determinants have been well documented at the national and state levels but are less well documented at the local level. Where this information is available, data on health disparities related to social determinants in Sonoma County are highlighted throughout the Profile, particularly related to risk behaviors, access to health care services and self-reported health status.

The two graphs which follow use census data on neighborhood poverty groups to highlight the relationship between mortality, chronic disease and income. In neighborhoods where more than 15% of residents are living at or below Federal Poverty Level (FPL), the death rate from chronic disease is substantially higher (528.5/100,000) than in neighborhoods where fewer than 5% of residents are living below FPL (428.9/100,000). Similarly, all-cause mortality rates are higher in neighborhoods with high concentrations of low-income residents.

Source: California Dept. of Public Health, *Death Statistical Master Files* (2005-2009)





Information gathered through the St. Joseph Health System Behavioral Risk Factor Survey, conducted in Sonoma County in June 2012, further illustrates the links between social determinants, predominantly income and educational attainment, and disparities in health and health care access. *(Source:* St. Joseph Health, *Behavioral Risk Factor Surveillance System)*

Self-reported physical health status varies significantly by income and education. For example:

- Among respondents, 62.8% of individuals with incomes over 200% of FPL rated their health as "very good" or "excellent" as compared with 23.1% of those living below FPL.
- Respondents with the highest education levels (college graduate or above) reported very good/excellent health nearly three times more often than did those without a high school diploma (66.4%/22.2%).
- And, 29% of survey respondents with incomes below FPL reported that their health was "not good" on 10 or more days of the past 30 days as compared with 9% of those living above 200% FPL.

The survey demonstrated similar links with regard to mental health status.

- Among respondents living under 200% of FPL, 40.2% reported "excellent" or "very good" mental health as compared with 71.2% of those with higher incomes.
- Among those living below FPL, over 30% report only "fair" or "poor" mental health.
- Among Sonoma County adults with the highest education levels (college graduate or above), 72% report excellent/very good mental health as compared with 28.6% of those without high school degree. Over 30% of these respondents report fair/poor mental health.

Social determinants can also drive differences in access to health care and services.

- More respondents with incomes below FPL reported difficulty finding medical care "when they needed it" than did those living at 200% FPL and above (5.3%/23%).
- Among adults with incomes between 100-200% of FPL, over 15% reported similar difficulty.
- Over 25% of those with incomes below 200% FPL reported that they did not get "a prescription medicine that they needed" during the past year because they could not afford it while 5.8% of those reporting higher incomes did.

The survey revealed similar disparities with regard to dental care access.

- 77% of survey respondents with incomes at 200% of FPL or higher reported having had their teeth cleaned by a dentist or dental hygienist within the past year, as compared with 47% of those with incomes below that level.
- Among respondents living below FPL, only 35% report cleaning within the past year; 16% report not having had their teeth cleaned in the past 5 years; and 11% report never having had them cleaned.

Ethnicity, *per se*, is not a social determinant of health. However, because Hispanics and other populations of color in Sonoma County are more likely, on average, to be lower-income and less well educated than White, non-Hispanics, they are often disproportionately impacted by social determinants and more likely suffer health disparities because of this. For example:

- While 58.7% of non-Hispanic whites rated their health as "very good" or "excellent," only 35.9% of Hispanics did so.
- Hispanic survey respondents also reported higher rates of fair/poor mental health (18.9%) than did white non-Hispanics (11.7%).
- Among Hispanic survey respondents, 12.4% reported difficulty finding a doctor as compared with 7.1% of non-Hispanic Whites.
- 19% of Hispanic respondents said they did not have a usual source of care, as compared with 8.9% of non-Hispanic Whites.
- Just fewer than 50% of Hispanic respondents reported that they had no health insurance coverage, as compared with 12% of non-Hispanic Whites.

More data on which groups are most affected by social determinants and how these determinants are impacting health outcomes over time are needed to create a clear picture of population health status in Sonoma County and to develop strategies to address resulting health disparities.

CHILDREN: Prenatal Period to 1 Year
Indicators Mortality and Morbidity
Highlights:

- During the 2008-10 period, the annual average for infant deaths (birth to age 1) was 24 deaths. The mortality rate for children in this age group is lower than California and meets the Healthy People 2020 goal for infant mortality.
- The three leading causes of death in this age group are: conditions originating in the perinatal period (including birth trauma, respiratory distress and prematurity); congenital malformations of the infant; and unintentional injury. (*Source* California Dept. of Public Health, *Death Statistical Master Files* (2008-2010)*)*

- Though the number of fatal unintentional injury deaths is very small, the leading causes are suffocation, falls, and burns with hot objects or substances. (*Source:* California Dept. of Public Health, *Death Statistical Master Files* (2008-2010))
- Nearly one in five births were to mothers who received late (not first trimester) or no prenatal care.
- Some "perinatal conditions" and all unintentional injuries are considered preventable with enhanced access to prenatal care, improved maternal health status and effective parent education on child health and safety.

Table 5. Indicators of Mortality and Morbidity – Children: Prenatal – 1 year

Indicator	Data Year(s)	Annual Average	Sonoma County	California	Healthy People 2020
Non-fatal unintentional injury hospitalization rate per 10,000[1]	2008-2010	10	165.4	239.2	N/A
Infant mortality rate per 1,000 live births[2]	2008-2010	24	4.2	4.9	6.0
Percent of births born low birth weight (<2500 g)[3]	2008-2010	327	5.8%	6.8%	7.8%
Percent of births born preterm (<37 weeks)[3]	2008- 2010	449	8.2%	10.4%	11.4%
Percent of births to mothers who received late (not first trimester) or no prenatal care[3]	2008-2010	949	18.3%	17.1%	22.1%
Teen birth rate per 1,000 females 15-19 years[3]	2008-2010	390	22.6	32.1	N/A

BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.

[1] California Dept. of Public Health, *EPICenter: California Injury Data Online*, Overall Injury Surveillance
[2] California Dept. of Public Health, *Death Statistical Master Files* (2008-2010)
[3] California Dept. of Public Health, *Birth Statistical Master Files* (2008-2010)

Indicators of Health and Healthy Development

Highlights

- Nearly one quarter of women report food insecurity during pregnancy.
- Self-reported maternal use of tobacco and alcohol during pregnancy exceeds statewide rates.
- Over 20% of mothers report being obese prior to pregnancy.
- 12% of mothers report postpartum depression, a condition that can interfere with the critical infant bonding process.
- An estimated 5.1% of births were to mothers aged 19 and younger. The teen birth rate, a risk factor for poor birth outcomes, is significantly lower than the statewide rate.

- Sonoma County mothers report exclusive breastfeeding at 3 months and appropriate infant sleep hygiene at higher rates than do California mothers in general, exceeding the Healthy People 2020 goal.

Table 6. Indicators of Health and Healthy Development – Children: Prenatal – 1 year

Indicator	Data Year(s)	Sonoma County	California	Healthy People 2020
% of mothers who reported any smoking in 1st or 3rd trimester of pregnancy[4]	2010	8.7%	5.6%	N/A
% of mothers who reported any alcohol use in 1st or 3rd trimester of pregnancy[4]	2010	18.3%	12.1%	N/A
% of mothers who reported being obese before pregnancy[4]	2010	22.1%	20%	N/A
% of mothers who reported postpartum depression[4]	2010	12.0%	13.4%	N/A
% of mothers who reported having no practical or emotional support during pregnancy[4]	2010	5.1%	5.8%	N/A
% of mothers who reported food insecurity during pregnancy[4]	2010	24.4%	18.8%	N/A
% of infants receiving any breastfeeding at hospital discharge[5]	2010	96.9%	90.8%	81.9%
% of women who reported exclusively breastfeeding 3 months after delivery[4]	2010	47.6%	31.6%	46.2%
% of women who reported placing infant on back to sleep[4]	2010	82.5%	74.4%	75.9%
Substantiated child abuse incidence per 1,000 children <1 year[6]	2010	16.8	22.1	N/A

BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.

[4] California Dept. of Public Health, *Maternal and Infant Health Assessment (MIHA) Survey* (2010)
[5] California Dept. of Public Health, *In-Hospital Breastfeeding Initiation Data* (2010)
[6] California Dept. of Social Services / Univ. of California at Berkeley, *Child Welfare Dynamic Report System*, Single Time Period Table (2010)

Indicators of Disparity

- 58.2% of births were to mothers with income at or below 200% of FPL. *(Source:* California Dept. of Public Health, *MIHA Snapshot, Sonoma County* (2010)
- An estimated 13% of mothers or infants needed but could not afford postpartum care. *(Source:* California Dept. of Public Health, *MIHA Snapshot, Sonoma County* (2010)
- While on the decline, teen birth rates for Hispanic and American Indian teens remain the highest in the county. (*Source:* California Dept. of Public Health, *Birth Statistical Master Files)*
- Births to Hispanic teens are approximately four times greater than births to White teens. (*Source:* California Dept. of Public Health, *Birth Statistical Master Files)*

- A cluster of teen pregnancy "hotspots" in southwest Santa Rosa has a teen birth rate three times the county average. (*Source:* California Dept. of Public Health, *Birth Statistical Master Files*)

CHILDREN: 1 to 12 Years

Indicators of Mortality and Morbidity

Highlights:

- During the 2008-10 period, the annual average for deaths in this age group was 9. The mortality rate for children in this age group is lower than California as a whole.
- The three leading causes of mortality are cancer, unintentional injury and diseases of the nervous system.
- Each year, an average of two children in this age range die and another 99 children are hospitalized for non-fatal unintentional injuries – all of which are considered preventable.
- The leading causes of non-fatal unintentional injury hospitalizations are falls, poisoning and motor vehicle collisions. Just under half of these hospitalizations were for falls.

  (*Source:* California Dept. of Public Health, *EPICenter: California Injury Data Online*)
- Over 300 children under age 5 visit hospital emergency rooms each year for asthma.

Table 7. Indicators of Mortality and Morbidity – Children: 1-12 years

Indicator - Per 100,000 Children	Data Year(s)	Annual Average	Sonoma County	California	Healthy People 2020
Child death rate 1-14 years	2008-2010	11	12.4	13.8	N/A
Cancer death 1-14 years	2008-2010	1	1.1	2.4	N/A
Unintentional injury death rate 1-12 years	2008-2010	2	2.6	3.6	N/A
Non-fatal unintentional injury hospitalization rate 1-12 years	2008-2010	99	125.9	166.4	N/A
Non-fatal unintentional injury hospitalization rate from falls 1-12 years	2008-2010	44	56.2	67.9	N/A
Non-fatal unintentional injury hospitalization rate from motor vehicle collisions 1-12 years	2008-2010	8	10.2	17.5	N/A
Non-fatal unintentional injury hospitalization rate from poisonings 1-12 years	2008-2010	9	11.5	11.6	N/A
Asthma hospitalization rate <5 years	2009	58	18.2	22.7	18.1
Asthma hospitalization 0-17 years	2010	97	8.0	11.0	N/A
Rate of hospital emergency department visits for asthma <5 years	2009	303	95.3	109.9	95.5

Source: California Dept. of Public Health, *Asthma Data Query*

	BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.

Indicators of Health and Healthy Development

Highlights:

- One quarter of Santa Rosa City Schools' 5th graders are obese.
- Nearly three-quarters of Sonoma County 5th graders failed to meet 6 of 6 criteria of the California Physical Fitness Test.
- Nearly 20% of Sonoma County children aged 1-12 years did not see a doctor in the preceding year.
- Sonoma County immunization rates for kindergarteners do not meet the Healthy People 2020 goal.
- 18% of survey respondents reported that their child had not visited a doctor for a routine check-up or general exam within the past year. *(Source:* St. Joseph Health, *Behavioral Risk Factor Surveillance System*)
- 11% of survey respondents reported that their child had not visited a dentist or dental clinic within the past year. (*Source:* St. Joseph Health, *Behavioral Risk Factor Surveillance System)*
- 72% of survey respondents reported that their child "always" wears a helmet when riding a bicycle. *(Source:* St. Joseph Health, *Behavioral Risk Factor Surveillance System)*

Table 8. Indicators of Health and Healthy Development – Children: 1-12 yrs

Indicator	Data Year(s)	Sonoma County	California	Healthy People 2020
% of low income children 2-4 years who are obese	2008-2010	15.4%	17.3%	9.6%
% of low income children 5-11 years who are obese	2008-2010	23.4%	21.3%	15.7%
% of 5th-graders who are obese (Santa Rosa City Schools)	2008-2010	25%	N/A	N/A
% of low income children 1-2 years who have iron deficiency anemia	2008-2010	17.5%	14.8%	14.3%
% of low income children 3-4 years who have iron deficiency anemia	2008-2010	14.0%	13.0%	4.3%
% of kindergarteners who are up-to-date on recommended immunizations	2011	89.9%	90.9%	95%
% of children 3-11 who have seen a dentist in the past year	2009	N/A	84.7%	49%
% of children 1-12 who have seen a doctor	2009	80.2%	90.5%	N/A

Indicator	Data Year(s)	Sonoma County	California	Healthy People 2020
in the past year				
Rate of substantiated child abuse per 1,000 children 1-12 years	2010	8.0	9.7	8.5
% of 5th graders who meet 6 of 6 fitness criteria (in Healthy Fitness Zone)	2010-11	26.5%	25.2%	N/A
% of 3rd graders who are proficient at language arts	2010	46%	46%	N/A

	BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.

Indicators of Disparity

- 17.5% of low-income children aged 1-2 yrs. have iron deficiency anemia, a symptom of poor nutritional status.
- In school fitness testing, 15.4% of Hispanic 5th-graders met 6 out of 6 criteria, as compared with 34.2% of White, non-Hispanic children. *(Source: CA Dept. of Education, DataQuest; Physical Fitness Testing*
- Among children 0-4 yrs., the hospital emergency department visit rate for asthma by African Americans was 231.6, as compared to 100.6 for Hispanics and 67.9 for Whites. For children 5-14 years, the asthma ED visit rate was similar for Hispanics and Whites (45.2/40.1), while African American rate continued to be far higher (189.2).
- The 2009 Sonoma County Smile survey found that low-income kindergarteners and 3rd-graders had more than twice the level of untreated decay of more affluent children (21%/9%).
- The Smile Survey found that 65% of Hispanic children had a history of tooth decay as compared to 32% of White children. Hispanic children had nearly twice the level untreated decay as White children (20%/11%).
- In 2011, 61% of White 3rd graders were proficient or advanced in English Language Arts while 27% of Latino students were. *(Source: CA Dept. of Education, DataQuest; STAR Testing)*
- Only 30% of economically disadvantaged 3rd graders were proficient or advanced, compared with 62% non-disadvantaged students. *(Source: CA Dept. of Education, DataQuest; STAR Testing)*

CHILDREN: 13 – 17 Years

Indicators of Mortality and Morbidity

Highlights:

- The three leading causes of mortality are unintentional injury (28%), cancer (17%) and diseases of the nervous system (17%). (*refer to Table 2*)

- The leading causes of hospitalization for non-fatal unintentional injury are falls, motor vehicle collisions, and injury from other transportation. *(Source: California Dept. of Public Health, EPICenter: California Injury Data Online)*
- Non-fatal hospitalizations for children in this age group are higher than the California rate.

Table 9. Mortality and Morbidity Indicators - Children: 13-17 years

Indicator: Per 100,000 Children	Data Year(s)	Annual Average	Sonoma County	California	Healthy People 2020
Child death rate 15-19 years	2007-2009	10	39.5	44.2	55.7
Unintentional injury death rate 13-17 yrs.	2008-2010	2	5.0	6.1	NA
Non-fatal unintentional injury hospitalization rate 13-17 years	2008-2010	72	213.7	204.7	NA
Non-fatal unintentional injury hospitalization rate from falls 13-17 years	2008-2010	18	53.7	51.7	NA
Non-fatal unintentional injury hospitalization rate from motor vehicle collisions 13-17 years	2008-2010	17	50.7	47.3	NA
Non-fatal unintentional injury hospitalization rate from poisonings 1-12 years	2008-2010	5	15.9	12.7	NA
Suicide death rate 13-17 years	2008-2010	1	2.0	2.8	NA
Non-fatal hospitalization rate from self-harm injury 13-17 years	2008-2010	10	30.8	53.8	NA

BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.

Indicators of Health and Healthy Development

Highlights:

- Nearly one-quarter of low-income children, 12-19 years, are obese. This is higher than the California average and does not meet the Healthy People 2020 goal.
- Only 34.6% of 9th graders meet 6 out of 6 fitness criteria. Fitness levels for both 7th and 9th graders are below California averages.
- The percentages of Sonoma County 11th-graders who report smoking, binge drinking and use of prescription painkillers are higher than statewide averages.
- 28% of 9th graders report “feeling sad or hopeless” in the past 12 months.

Table 10. Indicators of Health and Healthy Development- Children: 13-17 years

Indicator	Data Year(s)	Sonoma County	California	Healthy People 2020
% of low-income children 12-19 yrs who are obese	2008-10	24.1%	22.6%	16.1%
% of teens 12-17 who reported eating 5+ fruits or vegetables per day	2007-09	Not stable		NA
% of teens 12-17 who reported eating fast food more than 2 times in the past week	2009	31.4%	48.2%	NA
% of 9th graders who are current smokers (smoked a cigarette in past 30 days)	2007-09	11%	9%	16%
% of 11th graders who are current smokers (smoked a cigarette in past 30 days)	2007-09	16%	13%	16%
% of 9th graders who reported drinking alcohol in past mo.	2007-09	28%	27%	NA
% of 11th graders who reported drinking alcohol in past mo.	2007-09	44%	36%	NA
% of 9th graders who reported binge drinking in past mo.	2007-09	12%	15%	8.5%
% of 11th graders who reported binge drinking in past mo.	2007-09	26%	22%	8.5%
% of 9th graders who reported ever taking prescription painkillers	2007-09	13%	13%	NA
% of 11th graders who reported ever taking prescription painkillers	2007-09	24%	17%	NA
Chlamydia rate per 100,000 females 15-19 years	2010	1400.7	2247.0	NA
Percent of 9th graders who meet 6 of 6 fitness criteria (in Healthy Fitness Zone)	2010-11	34.6%	36.8%	NA
Rate of substantiated child abuse per 1,000 children 13-17 yrs.	2010	4.9	6.9	8.5
Percent of 9th graders who reported feeling safe at school (safe or very safe)	2007-09	60%	56%	NA
Percent of 11th graders who reported feeling safe at school (safe or very safe)	2007-09	62%	59%	NA
Percent of 9th graders who reported feeling sad or hopeless in past 12 months	2007-09	28%	32%	NA
Percent of 11th graders who reported feeling sad or hopeless in past 12 months	2007-09	30%	33%	NA

BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.

Indicators of Disparity

- In 2010-2011 fitness testing, 48.8% of White, non-Hispanic 9th graders were able to meet 6 out of 6 criteria, as compared with 23.7% of Hispanic children.
- Students identified as "socioeconomically disadvantaged" (based on school criteria for parental education level and family income) were less likely to meet fitness criteria than more advantaged students – 22% versus 36% for 7th graders and 25.4% versus 40.2% for 9th graders. *(Source: CA Dept. of Education, DataQuest; Physical Fitness Testing*
    - 93.6% of White 9th graders graduate from high school 4 years later as compared with 64.4% of Latino students. *(Source: CA Dept. of Education, DataQuest; Student & School Data Files)*

ADULTS: 18–59 Years

Indicators of Mortality and Morbidity

Highlights:

- During the 2008-10 periods, the annual average for deaths in this age group was 599.
- The three leading causes of mortality are cancer (29%), unintentional injury (15%), and coronary hearth disease (10%).
- The unintentional injury rate for this age group is higher than California as a whole.
- The leading causes of non-fatal unintentional injury hospitalization are falls, motor vehicle collisions and poisoning. *(Source: California Dept. of Public Health, EPICenter: California Injury Data Online*
- Approximately 31,000 Sonoma County adults in this group report being diagnosed with hypertension.
- Approximately 24,000 individuals in this group report living with at least one disability.

Table 11. Mortality and Morbidity Indicators - Adults: 18-59 years

Indicator	Data Year(s)	Annual Average	Sonoma County	California	Healthy People 2020
Death rate per 100,000 persons 18-59 years	2008-2010	599	224.8	NA	NA
Cancer death rate per 100,000 persons 18-59 years	2008-2010	176	66.1	NA	160.6
Coronary heart disease death rate per 100,000 persons 18-59 years	2008-2010	59	22.2	NA	100.8
Unintentional injury death rate per 100,000 persons 18-59 years	2008-2010	89	31.6	28.3	36.0
Death rate from unintentional motor vehicle collisions per 100,000 persons 18-59 years	2008-2010	25	9	9.7	12.4
Hospitalization rate for non-fatal unintentional injuries per 100,000 persons 18-59 years	2008-2010	1014	361.1	344.9	NA

Indicator	Data Year(s)	Annual Average	Sonoma County	California	Healthy People 2020
Hospitalization rate for non-fatal unintentional injuries from falls per 100,000 persons 18-59 years	2008-2010	307	109.3	106.5	NA
Hospitalization rate for non-fatal unintentional motor vehicle collisions per 100,000 persons 18-59 years	2008-2010	333	79.0	81.0	NA
Hospitalization rate for non-fatal unintentional poisonings per 100,000 persons 18-59 years	2008-2010	113	40.3	33.5	NA
Suicide death rate per 100,000 persons 18-59 years	2008-2010	52	18.6	12.0	10.2
Non-fatal hospitalization rate from intentional self-harm injury per 100,000 persons 18-59 years	2008-2010	158	56.1	58.3	NA
Percent of adults 18-59 years who have been diagnosed with diabetes	Not stable				NA
% of adults 18-59 years who report having been diagnosed with hypertension	2009	31000	11.8%	18.2%	26.9%
% of adults 18-64 years with at least one disability	2008-2010	24700	8.1%	8.0%	NA

BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.

Indicators of Health and Wellbeing

Highlights

- 17% of adults in this age group are obese.
- 16% of adults in this group are current smokers, higher than the California average and not meeting the Healthy People 2020 goal.
- 43.2% of adults in this group report binge drinking at least once in the past year (5 or more drinks for males, 4 or more for females).
- 58.4% of Hispanic survey respondents report consuming no alcoholic beverages during the preceding month as compared with 29.4% of White respondents. (*Source:* St. Joseph Health, *Behavioral Risk Factor Surveillance System*)
- Nearly one-fifth of adults in this group reported needing help for emotional/mental health problems or use of alcohol or drugs.

- 6% of adults, age 18-64, have lost teeth because of tooth decay, infection, or gum disease. *(Source:* The Commonwealth Fund, *Scorecard on Local Health System Performance, 2012)*
- 25.3% of adults, age 18-64, report "fair/poor health," 14 or more bad mental health days, or activity limitations. *(Source:* The Commonwealth Fund, *Scorecard on Local Health System Performance, 2012)*

Table 12: Health and Wellbeing Indicators - Adults: 18-59 years

Indicator	Data Year(s)	Sonoma County	California	Healthy People 2020
% of adults 18-59 years who are obese	2009	17.6%	22.6%	30.6%
% of adults 18-59 years who reported receiving no leisure time physical activity	2007	7.7%	12.9%	32.6%
% of adults 18-59 years who report eating 5 or more fruits and vegetables daily	2005	55%	49%	NA
% of adults 18-59 years who report being a current smoker	2009	16%	14.9%	12%
% of adults 18-59 years who report binge drinking in the past year	2009	43.2%	63.3%	NA
% of adults 18-59 years who needed help for emotional/mental health problems or use of alcohol/drugs	2009		16.1%	NA
% of adults 18-59 years who saw healthcare provider when they needed help for an emotional problem/use of alcohol/drugs	2009	57.4%	54.1%	NA
Chlamydia rate per 100,000 females 15-44 years	2010	875.5	1278.5	NA
% of adults 18-59 years who reported being in fair or poor health	2009	10.2%	16.3%	NA

BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.

Indicators of Disparity

- Hispanic adults in the 18-59 age group have higher obesity rates (38.5%) than Whites (20%). *(Source:* UCLA Center for Policy Research, *California Health Interview Survey* (2009)*)*
- Adults with incomes below 200% FPL have higher rates of obesity than adults with incomes above that level (28.0%/ 22.6%). *(Source:* UCLA Center for Policy Research, *California Health Interview Survey* (2009)*)*
- 27.2% of Hispanic survey respondents report having had a mammogram within the past 2 years as compared with 59% of White respondents.

- 20.1% of lower income adults report smoking cigarettes in the past 30 days as compared with 8.9% of higher income adults. *(Source:* UCLA Center for Policy Research, *California Health Interview Survey* (2009)*)*
- 64.8% of White survey respondents rate their mental health, which includes stress, depression and problems with emotions, as "very good" or "excellent" as compared with 44.6% of Hispanic respondents. (*Source:* St. Joseph Health, *Behavioral Risk Factor Surveillance System)*
- 32.3% of Hispanic adults engage in regular physical activity as compared with 42.9% of White adults. *(Source:* UCLA Center for Policy Research, *California Health Interview Survey* (2009)*)*
- 88.9% of White adults have health insurance coverage compared with 68.5% of Hispanic adults in this age group. *(Source:* UCLA Center for Policy Research, *California Health Interview Survey* (2009)*)*

ADULTS: 60 Years and Over

Indicators of Mortality and Morbidity

Highlights:

- During the 2008-10 period, the annual average number of deaths in this age group was 3,185.
- Sonoma County's death rate in the 60-69 group is slightly lower than the state rate but significantly higher than the state rate for ages 80 years and over.
- The three leading causes of mortality in this age group are cancer (24%), coronary heart disease (18%) and stroke (8%).
- The death rate for falls for this age group is higher than the California rate and almost three times higher than the Healthy People 2020 goal.
- The leading causes of hospitalization for non-fatal unintentional injury in this age group are falls, poisoning and motor vehicle collision. *(Source:* California Dept. of Public Health, *EPICenter: California Injury Data Online*)
- 44,000 individuals, age 60 and older, report having been diagnosed with hypertension.

Table 13. Mortality and Morbidity Indicators – Adults: 60 years and Over

Indicator	Data Year(s)	Annual Average	Sonoma County	California	Healthy People 2020
Death rate per 100,000 persons 60+ years	2008-10	3185	3532.3	3144.3 (2007-09)	NA
Cancer death rate per 100,000 persons 60+ yrs	2008-10	774	904.7	NA	160.6
Female breast cancer death rate per 100,000 persons 60+ years	2008-10	59	66.7	NA	20.6
Colorectal cancer death rate per 100,000 persons 60+ years	2008-10	71	80.7	NA	14.5

Indicator	Data Year(s)	Annual Average	Sonoma County	California	Healthy People 2020
Coronary heart disease death rate per 100,000 persons 60+ years	2008-10	575	630.3	NA	100.8
Stroke death rate per 100,000 persons 60+ yrs	2008-10	248	270.6	NA	36.0
Alzheimer's disease death rate per 100,00 persons 60+ years	2008-10	245	260.9	NA	NA
Chronic lower respiratory disease death rate per 100,000 persons 60+ years	2008-10	221	257.4	NA	NA
Death rate from unintentional falls per 100,000 persons 60+ years	2008-10	33	35.7	27.2	12.4
Hospitalization rate for non-fatal unintentional injuries per 100,000 persons 60+ years	2008-10	1710	1932.5	1874.8	NA
Hospitalization rate for non-fatal unintentional injuries from falls per 100,000 persons 60+ yrs	2008-10	1248	1410.9	1347.3	NA
Hospitalization rate for non-fatal unintentional poisonings per 100,000 persons 60+ years	2008-10	87	97.7	83.5	NA
Suicide death rate per 100,000 persons 60+ yrs	2008-10	19	20.8	15.9	10.2
Non-fatal hospitalization rate from intentional self-harm injury per 100,000 persons 60+ years	2008-10	24	24.4	23.2	NA
Percent of adults 60+ years who have been diagnosed with diabetes	2009	10,000	10.6%	18.3%	NA
Percent of adults 60+ years who report having been diagnosed with hypertension	2009	44000	47%	55.2%	26.9%
Percent of adults 65+ years with at least one disability (Census)	2008-10	22611	35.1%	37.5%	NA
Percent of adults 60+ years with who were disabled due to physical, mental or emotional condition (CHIS)	2007-09	40,000	42.3%	47.1%	NA

BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.

The following tables provide a more detailed breakdown on death rates (per 100,000) for leading causes among individuals over age 65. While death rates for those in the 65-74 year age range are slightly higher than for California as a whole, this differential increases for those aged 75 and over. Hispanics have significantly lower death rates than White non-Hispanics in both the 65-74 and 75-84 age ranges.

Table 13 a. Age Specific Death Rates (per 100,000) by Cause

2010	Sonoma County						California					
Age	Total	Cancer	Unintentional Injury	Stroke	CLRD	Alzheimers	Total	Cancer	Unintentional Injury	Stroke	CLRD	Alzheimers
65-74	1,571.1	636.6	34.7	78.1	127.3	17.4	1,504.3	550.8	32.5	73.3	104	19.4
75-84	5,093.5	1,449.1	97.3	335.2	459.6	324.4	4,109.1	1,095	67.9	270.3	319.6	203.8
85+	15,640.3	1,916.8	234.5	1,386.6	897.2	2,130.9	12,159	1,646.9	193.4	947	703.4	1,183.4

2010	Sonoma County				California			
Age	Male	Female	WNH	HISP	Male	Female	WNH	HISP
65-74	1,790.6	1,377.6	1,663	991.5	1,797.6	1247.7	1,597.8	1,313
75-84	5,887.6	4,512.7	5,597.9	2,429.8	4,851.9	3,563.7	4619	3,369.3
85+	17,041.3	14,932.5	17,441.4	5,327.9	5,327.9	11,432.6	13,878	8,606.7
	BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.							

Indicators of Health and Wellbeing

Highlights

- Nearly one-quarter of adults in this age group are obese, failing to meet the Healthy People 2020 goal.
- 16.9% of adults 60 and over report binge drinking in the past year, significantly exceeding the California rate.
- 63.4% of adults in this age group report having had a flu shot during the previous year.
- Over 35% of adults 65 years and older are living with at least one disability. This percentage rises to 50% for those 75 years and older.
- The most common disabilities are those that interfere with: ambulation (21.6%), living independently (16.1%), and hearing (15.3%).

Table 14. Indicators of Health and Wellbeing – Adults: 60 years and Over

Indicator	Data Year(s)	Sonoma County	California	Healthy People 2020
Percent of adults 60+ years who are obese	2009	23.8%	23.0%	30.6%
Percent of adults 60+ years who reported receiving no leisure time physical activity	2007	15.3%	18.4%	32.6%
Percent of adults 18-59 years who report eating 5 or more fruits and vegetables daily	2005	57.4%	47.9%	NA
Percent of adults 60+ years who report being a current smoker	2009 (2007)	Not stable (7.4%)	(8.5%)	12%
Percent of adults 60+ years who report binge drinking in the past year	2009	16.9%	11.7%	NA
Percent of adults 60+ years who needed help for emotional/mental health problems or use of alcohol/drugs	2009	10.5%	7.4%	NA
Percent of adults 60+ years who saw healthcare provider when they needed help for an emotional problem/use of alcohol/drugs	2009	Not stable	Not stable	NA
Percent of adults 60+years who reported having a flu shot in past 12 months	2007-2009	63.4%	59.9%	NA
Percent of adults 60+ years who reported being in fair or poor health	2009	16.7%	25.9%	NA
Percent of adults 60+ years who reported being in good or better health	2007-2009	83.3%	74.1%	NA

BLUE highlight indicates county indicator is worse than California or does not meet the Healthy People 2020 objectives.

Indicators of Disparity

- 88.5% of seniors with incomes above 200% FPL report good or better health as compared with 63.1% of those with annual income below this level. *(Source:* UCLA Center for Policy Research, *California Health Interview Survey* (2009)*)*
- 22% of seniors aged 65 and older have incomes less than 200% of FPL; for seniors over age 75, the percentage rises to 27%. *(Source:* U.S. Census Bureau, *2006-2010 ACS Estimates.)*
- Males in 65 and older age group die at higher rates for cancer, coronary heart disease and lower respiratory disease while females die at higher rates for stroke and Alzheimer's. *(Source:* California Dept. of Public Health, *Death Statistical Master Files*)

- The death rates among Whites for each of the leading causes of death (cancer, coronary heart disease, chronic lower respiratory diseases, stroke and Alzheimer's) are more than twice what they are for Hispanics.

  (Source: California Dept. of Public Health, *Death Statistical Master Files*)
- The death rate for conditions with "diabetes as a primary or contributing cause of death" is higher for Whites (394.3/100,000) than for Hispanics (316.1/100,000).

  (Source: California Dept. of Public Health, *Death Statistical Master Files)*

Health System Performance Indicators

Preventable Hospitalization

Rates of preventable hospitalization are considered a good index of primary care access and effectiveness. Sonoma County performs better than California as a whole in every measure in the table below. The county's preventable hospitalization rate is less than half the statewide rate for both hypertension and diabetes.

Table 15. Preventable Hospitalizations (Prevention Quality Indicators), Sonoma County and California 2009

Hospitalizations	Sonoma		California	
	Risk – Adjusted Rate	Number of Cases	Risk – Adjusted Rate	Number of Cases
Bacterial Pneumonia	203.5%	819	235.8%	64,185
Congestive Heart Failure (CHF)	148.4%	605	272.4%	73,213
Urinary Tract Infection	106.3%	424	155.9%	42,133
Chronic Obstructive Pulmonary Disease (COPD)	89.4%	360	134.7%	36,310
Diabetes Long-term Complication	58.6%	233	109.2%	30,076
Adult Asthma	54.3%	211	87.3%	24,386
Dehydration	28.8%	116	57.7%	15,681
Lower-extremity Amputation Among Patients With Diabetes	24.4%	99	28.3%	7,747
Angina Without Procedure	15.9%	64	25.4%	6,989
Hypertension	8.6%	34	36%	9,882
Uncontrolled Diabetes	4.7%	18	11.9%	3,329

Source: California Office of Statewide Health Planning and Development, *AHRQ-Prevention Quality Indicators, Patient Discharge Data* (2009)

- Rate = Per 100,000 state or county population with the exception of Perforated Appendix (per 100 appendicitis cases).

- All rates are age-sex adjusted. Blank cells indicate that no procedures were performed or conditions treated.

Measures for health system performance in the tables below are selected from the Commonwealth Fund's 2012 Scorecard on Local Health System Performance and Fund's 2011 State Scorecard of Child Health System Performance. The Scorecards provide communities with comparative data on the performance of their health care systems and include indicators spanning dimensions of health system performance including: access, treatment, and potentially avoidable hospital use and cost. The unit of analysis in the first table is the "hospital referral region" (HRR), which is an area that represents a regional market for health care. While HRR's do not precisely align with county or state boundaries, the Santa Rosa HRR corresponds closely to Sonoma County. Local HRR values are not available for pediatric measures, however four measures are included below for comparison with California rates.

Highlights:

- Sonoma County exceeds California in all measures related to access and is in the top 10th percentile for annual adult dental visits.
- Sonoma County lags the California rate for risk-adjusted 30-day mortality among Medicare patients hospitalized for pneumonia.
- Sonoma County is in the top 10th percentile for all of the following measures of potentially avoidable hospital use and cost: admissions for ambulatory care-sensitive conditions (Medicare); re-admissions within 30 days of discharge (Medicare); hospitalization of long-stay nursing home patients; and re-admission of first-time nursing home residents.
- Sonoma County exceeds statewide measures for children with healthcare insurance, usual source of care and annual dental visits (3-11 years).

Table 16. Health System Performance Measures - Santa Rosa California

Table 16.a. Access

Dimension and Indicator	Year	HRR Rate*	Top 10th %	State Rate	Quartile
% of adults ages 18 – 64 insured	2009-2010	80.7%	87.5%	75.1%	2
% of children ages 0 – 17 insured	2009-2010	93.4%	96.3%	90.8%	3
% of adults reported no cost-related problem seeing a doctor when they needed to within the past year	2009-2010	86.8%	90.7%	82.9%	2
% of at-risk adults visited a doctor for routine checkup in the past two years	2009-2010	86.1%	90.4%	84.1%	2
% of adults visited a dentist, dental hygienist, or clinic within the past year	2010	78.1%	77.9%	69.7%	1

Table 16.b. Prevention and Treatment

Dimension and Indicator	Year	HRR Rate*	Top 10th %	State Rate	Quartile
% of adults with a usual source of care	2009-2010	79.5%	88.8%	73.0%	3
% of adults age 50 and older received recommended screening and preventive care	2008 & 2010	46.0%	50.8%	41.4%	2
% of adult diabetics received recommended preventive care	2008-2010	N/A	55/7%	N/A	N/A
% of hospitalized patients given information about what to do during their recovery at home	2010	82.2%	86.2%	79.8%	3
Risk-adjusted 30-day mortality among Medicare patients	7/07 – 6/10	14.9	14.4	15.5	3
Risk-adjusted 30-day mortality among Medicare patients hospitalized for heart attack	7/07-6/10	14.9	14.4	15.5	3
Risk-adjusted 30-day mortality among Medicare patients hospitalized for pneumonia	7/07- 6/10	12.0	10.6	11.8	3
% of Medicare decedents with a diagnosis of cancer without any hospice or who enrolled in hospice during the last three days of life	2007	51.9%	46.6%	62.4%	2

Table 16.c. Potentially Avoidable Hospital Use and Cost

Dimension and Indicator	Year	HRR Rate*	Top 10th %	State Rate	Quartile
Hospital admissions among Medicare beneficiaries for ambulatory care-sensitive conditions, per 100,000 beneficiaries	2009	2,934	4,045	4,913	1
Readmissions within 30 days of discharge as percent of all admissions among Medicare beneficiaries	2008	14.4%	15.1%	18.2%	1
% of long-stay nursing home residents hospitalized within six-month period	2008	9.6%	11.9%	20.4%	1
% of first-time nursing home residents readmitted within 30 days of hospital discharge to the nursing home	2008	13.5%	15.8%	20.4%	1

**Hos. Referral Region*

Table 17. Pediatric Performance Measures

	Sonoma		California		
Performance Measures	**Estimate**	**Rate or %**	**Estimate**	**Rate or %**	**Source**
% of children < 18 years insured	98700	92.9%	8455939	91.0%	US Census, 2010
% of children with a medical home (usual source of care*)	110000	94.9%	8916000	90.8%	CHIS, 2009
% of children 3-11 years with a dental visit in the past year (not necessarily preventative	62000	93.1%	4503000	84.7%	CHIS, 2009
Hospital discharge rate for pediatric asthma per 100,000 children 2-17 years	186	58.8			OSHPD, PDD 2008-2010

**Includes Dr. office*

VI. PRIORITIZED COMMUNITY HEALTH NEEDS

A. Methodology for Criteria for Prioritization

In September 2012, the Community Health Improvement Committee (CHIC) sponsored a priority-setting session of 20 Sonoma County health and community leaders. The purpose was to facilitate a meeting of local Sonoma County experts to review preliminary data and work together to select priority health issues for inclusion in CHNA document. Recommendations were developed using information from the CHNA data profile, findings from the key informant interviews, focus groups, telephone surveys and other local data sources. The list of participants in the priority-setting session can be found in Appendix IV.

The following criteria were used for selection of the top health priorities.

- **Significant impact:** this health issue is important in both scope (affects a large number of people within the population) and scale (has serious consequences for those affected).
- **Benchmark issue:** Sonoma County lags behind other California counties on this health issue and/or is not on track to achieve Healthy People 2020 goals.
- **Disparities in health status:** this health issue disproportionately impacts the health status of one or more subpopulations.
- **Links to chronic disease:** this indicator is linked to chronic disease and related health outcomes.
- **Potential for change**: Local efforts by hospitals and other partners are likely to result in meaningful improvement in the scope and/or severity of this health issue.

- **Prevention opportunity:** this indicator represents a significant opportunity to improve health outcomes using prevention-focused approaches.

B. Prioritized Health Needs and Health Need Profiles

Participants in the priority-setting session analyzed the data collected from various sources, contributed their expertise, and utilized the agreed-upon criteria to identify top health priorities for inclusion in the CHNA. The first four health concerns were identified as most critical with an additional nine issues highlighted as very important.

The health priorities identified were:

1. **Healthy eating and physical fitness**
2. **Gaps in access to primary care**
3. **Access to substance use disorder services**
4. **Barriers to healthy aging**
5. Access to mental health services
6. Disparities in educational attainment
7. Cardiovascular disease (Stroke, Diabetes)
8. Adverse childhood experiences (ACES)
9. Access to health care coverage
10. Tobacco use
11. Coordination and integration of the local health care system
12. Disparities in oral health
13. Lung, breast, and colorectal cancer

Health Priority Summaries and Community Assets

Health priority summaries were prepared for each of the 13 selected priorities. The summaries provide the rationale for the selection, highlight data that informed the choice as a priority and include a preliminary inventory of community assets that offer opportunities for collaboration and leveraging.

1. Healthy Eating and Physical Fitness

Healthy eating and physical activity are essential to healthy child development and to maintaining good physical and mental health at all ages. A healthy diet and physical activity levels can help to prevent the onset or worsening of chronic diseases such as Type 2 diabetes, heart disease and cancer. Poor nutrition contributes to childhood anemia and poor pregnancy outcomes. Breastfeeding helps babies develop immunities to diseases and improves child health in other important ways. Unhealthy food choices, especially in low-income communities, are often the result of environmental conditions. Lack of community infrastructure

(transportation, neighborhood based full-service grocery stores) may limit access to affordable healthy food choices. Similarly, concerns about neighborhood safety can inhibit use of parks and playgrounds, resulting in reduced physical activity by residents.

Why this issue/condition is important in Sonoma County:
Poor nutrition and lack of physical activity are driving an epidemic of obesity in both children and adults.

Morbidity and Mortality	Healthy eating and physical fitness were highlighted in the Data Profile as leading causes of morbidity and mortality.
Benchmark	• One quarter of Santa Rosa elementary school students are obese. Among older children, 25% of Sonoma County students ages 12-19 are obese. Both groups exceed the California rate and do not meet Healthy People 2020 targets. • In every age category, Sonoma County residents do not meet Healthy People 2020 goals for weight.
Health Disparity	• The obesity epidemic disproportionately affects low-income populations, with higher rates of obesity among low-income Latino children at all age levels. • In school fitness testing, only 15.4% of Hispanic fifth-graders met 6 out of 6 criteria, as compared with 34.2% of White, non-Hispanic children. Students identified as "socioeconomically disadvantaged" (based on school criteria for family income and parental education level) were less likely to meet fitness criteria than more advantaged students – 22% versus 36% for 7th graders and 25.4% versus 40.2% for 9th graders. • In school fitness testing, only 15.4% of Hispanic fifth-graders met 6 out of 6 criteria, as compared with 34.2% of White, non-Hispanic children. • Childhood anemia, an indicator of poor nutritional status, also exceeds the state rate among low-income children.

How this issue is identified as a priority:

CHNA Priority Setting Process	Healthy eating and physical fitness were identified as the highest priority during the CHNA Priority Setting Process.
Selection Criteria	Healthy eating and physical fitness meet priority selection criteria for scope and scale, benchmark issue (obesity, anemia, fitness levels), disparities in health status, links to chronic disease, potential for health improvement based on local intervention, and opportunities for prevention approaches.
Key Informants	Among key informants, 8 of 18 identified chronic disease as a critical community health concern and 6 of those informants identified obesity as a key factor.
Focus Groups	Within the focus groups, 17 of 19 respondents identified obesity as a major health issue affecting their community while 10 identified the lack of access to healthy food. In describing the attributes of a "healthy community," 10 participants identified healthy eating as a critical asset.

Community resources and assets:

The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive. In some instances specific programs are "spotlighted' as representative of similar programs or services available in the county.

Resource Category	Asset
Policy and Initiatives	School Wellness Policy
	Healthy Eating Active Living (HEAL)
	Health Action
Collaborations and Networks	Redwood Community Health Coalition (RCHC)
	Community Activity and Nutrition-Coalition
	The Network for a Healthy California
	Safe Routes to School (SRTS)
	Sonoma County Bicycle Coalition (SCBC)
	Sonoma County Breastfeeding Coalition
	The School Garden Network
Physical Activity	Health Action IWALK
	Healthy for Life – school based program
	Open Spaces
	Parks
	SPOTLIGHT: Girls on the Run
	SPOTLIGHT: Northern CA Center for Well Being Active Play Every Day
Nutrition	Health Action iGROW
	CalFresh
	Sonoma County Food System Alliance
	Redwood Empire Food Bank
	Women Infants and Children (WIC) program
	SPOTLIGHT: Sonoma County Farmers Market/Electronic Benefits Transfer

2. Access to Primary Care

Strong systems of primary care services are associated with improved health outcomes and reduced health care costs. Access to quality primary care is important to eliminate health disparities and promote the health, quality of life and longevity of all Sonoma County residents. While many Sonoma County residents enjoy good access to primary care and have a trusted

source of care, too many do not. Those who are uninsured, low-income, less well-educated or are members of racial and ethnic minorities are less likely to receive needed ongoing, primary care, because they lack access due to economic, geographic, cultural or language barriers. These disparities are growing.

Although having insurance increases access to the health care system, it is not sufficient alone to ensure access to high quality primary care or appropriate use of services. The delivery system itself must offer the range and mix of services necessary to support patients in their efforts to protect and promote health. Primary care is the cornerstone of this system – bringing health promotion and prevention, cure and care together in a patient-centered, culturally competent medical home. In the medical home model, the primary care team coordinates the patient's ongoing care, links the patient to other parts of the health care delivery system, manages health care resources to achieve jointly defined health goals and offers patients a continuum of prevention and treatment options based on their unique needs. Effective use of this model can empower patients to manage their own health, promote the cost-effective use of health care resources, and improve health outcomes for individuals and communities.

Why this issue/condition is important in Sonoma County:

Lack of insurance is the primary barrier to health care access in Sonoma County. With implementation of the Affordable Care Act in January 2014, 14% of Sonoma County's population, currently uninsured, will have new options for coverage and access to health care. However, some low-income populations, because of their immigration status are ineligible for coverage under the new plans and others may find the required premiums beyond their reach. For these groups, access barriers will continue.

Even with insurance, for some populations – those with Medicare, individuals with geographic or language barriers – access is not guaranteed. Continued growth in the county population coupled with a dwindling physician supply, as older physicians retire and are not replaced, has created significant pressure on the county's current primary care and specialist cadres. A recent primary care capacity study, conducted by the Department of Health Services, highlighted concerns about projected increasing shortfalls in the physician workforce for both primary care and specialist disciplines.

How this issue is identified as a priority:

CHNA Priority Setting Process	Gaps in access to primary care services were identified as a priority during the CHNA Priority Setting Process.
Selection Criteria	Access to primary care meets the priority selection criteria for scope and scale, links to chronic disease, disparities in health status, potential for health improvement based on local intervention, and opportunities for prevention approaches.

Key Informants	Among key informants, 7 of 18 identified capacity issues related to access to primary care services. Many key informants noted that the local health care system is experiencing rapid change. Most saw this as positive and expressed support for increased integration across the health care delivery system, renewed emphasis on primary care and continued development of patient centered medical homes.
Focus Groups	Participants in the focus groups identified a number of barriers to health care access in their communities, including social determinants of health such as low wages, lack of transportation, lack of insurance and minimal preventive care for the uninsured.

Community resources and assets:
The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive.

Resource Category	Asset
Health Care Reform	Affordable Care Act - Health Exchanges
	Accountable Care Organizations (ACOs)
Patient Care – Treatment and Prevention Services	Redwood Community Health Coalition (RCHC)
	Patient Center Medical Home
	School Based Health Centers
	Teen Clinics in Sonoma County
	Jewish Community Free Clinic
	Planned Parenthood
Countywide Initiatives	Health Action - iCare – Excellence in Health Care
	Sonoma County Task Force for the Homeless
Provider Training - Workforce Development	Santa Rosa Family Medicine Residency
	Kaiser Residency Program
	Sonoma State University Family Nurse Practitioner Program
	Santa Rosa Junior College (SRJC)

3. Access to Substance Use Disorder Services

Substance (alcohol and other drug) abuse and abuse-related problems are among society's most pervasive health and social concerns. The abuse of prescription drugs, especially painkillers, is becoming more prevalent among both youth and adults. Substance use and abuse are significant contributors to poor health outcomes and are a major cause of unintentional injury and premature mortality. Addicted persons may engage in self-destructive or criminal

behavior, which can result in injury or death. Recreational substance use (use while driving, during sex, etc.) is a risk factor for injury, sexually transmitted disease, violence and unintentional overdose.

Alcohol and drug use can have serious health and safety consequences for youth and is associated with a variety of social and developmental problems during adolescence and in later life. Substance use during pregnancy can contribute to fetal loss, birth complications and long-term health and learning problems for children. Even moderate use of alcohol and other drugs (AOD) during pregnancy is proven to impair brain development and affect children's health. Continued use of alcohol and other drugs after birth can impair parents' responsiveness to their newborn's needs.

Treatment works. Timely access to culturally competent substance abuse treatment, tailored to the specific needs of those seeking treatment can break the cycle of addiction and benefit individuals, families and the community. Early screening for harmful substance use and addiction behaviors is critical to intervening with teens, pregnant women and others who can benefit from treatment. A broad continuum of treatment options, including detoxification, in-patient (residential) and outpatient treatment, post-treatment housing, community-based support and follow-up services are essential to meet the often life-long needs of addicts seeking to remain clean and sober.

Why this issue/condition is important in Sonoma County:

Prevalence	• Nearly 20% of adults ages 18-59 reported needing help for emotional/mental health problems or alcohol/drug issues, while 43% reported binge drinking in the previous year.
Benchmark	• Sonoma County residents, including teens and pregnant women, exhibit higher rates of alcohol and other drug (AOD) use than do Californians as a whole.
	• A significantly higher percentage of Sonoma County mothers report using alcohol during the first or third trimesters of pregnancy than do Californian mothers as a whole (18.3% vs. 12.1%).
	• Among Sonoma County 11th graders, 44% acknowledged having a drink in the past 30 days as compared to 36% of California students. Similarly, 26% of Sonoma County 11th graders compared to 22% of California 11th graders reported binge drinking in the past 30 days, both significantly higher than the Healthy People 2020 target of 8.5%. • More Sonoma County 11th graders also reported ever taking prescription painkillers than their counterparts in the state (24% vs. 17%).

Health Disparities

Treatment resources for low-income teens and adults are severely limited in Sonoma County, especially for non-criminal justice residential services. Medi-Cal does not cover residential

services. For this reason, low-income adults uninvolved with law enforcement have very limited access to AOD residential services. Sonoma County contracts with non-profit community-based substance abuse treatment providers for approximately 135 “beds” i.e., treatment slots for low-income resident. However, only 37 of these are designated as “community beds” – treatment slots available to low-income individuals who have not been referred through the criminal justice system. The remaining beds are designated for law enforcement-referred clients. Of the community beds, approximately half are restricted to 30-day treatment episodes, making long-term treatment extremely difficult to access for low-income clients needing a longer treatment course. Low-income pregnant and post partum women have greater access to treatment services, however, waiting lists are common.

The following table offers an overview of treatment capacity and admission average waiting times for low-income clients in County-funded treatment facilities.

Provider	WRS	DAAC Residential	DAAC Outpatient	DAAC Perinatal Outpatient	CHD Residential	CHD Outpatient
Avg. Wait - Days	14	25	0	45	15	0
Contracted Beds - Non Criminal Justice	13	19	N/A	N/A	5	N/A
Contracted Beds – Criminal Justice	1	70	N/A	N/A	26	N/A
Beds - Non Contracted w/ Sonoma County Behavioral Health	6	9	N/A	N/A	10	N/A

(Source: Sonoma County Behavioral Health Division Mental Health & Substance Use Disorder Services, Jan 2013)

How this issue is identified as a priority:

CHNA Priority Setting Process	Limited access to substance use disorder services particularly for low-income residents was identified as a priority during the CHNA Priority Setting Process.
Selection Criteria	Access to treatment services meets priority selection criteria for scope and scale, benchmark issue, links to chronic disease, contribution to health disparities, potential for health improvement based on local intervention, and opportunities for prevention approaches.
Key Informants	Key informants identified drug and alcohol abuse treatment services as a critical service gap in Sonoma County.
Focus Groups	A majority of focus group respondents (17 of 21 respondents) identified drugs as a major challenge to the health of their community and 16 of 20 respondents recommended that the community focus efforts on drug and gang prevention. Eight of 19 respondents identified markets selling alcohol as the most important

	issue affecting the health of people in the community.

Community resources and assets:

The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive. In some instances specific programs are "spotlighted' as representative of similar programs or services available in the county.

Resource Category	Asset
Sonoma County Department of Health Services	Sonoma County Prevention Partnership
	Sonoma County Advisory Board on Alcohol and Drug Problems
	The Sonoma County Family Recovery Project
	Sonoma County Perinatal Alcohol and Other Drug (AOD) Action Team
Prevention Programs	Project Alert
	Project SUCCESS
	Needle Exchange Program
	SPOTLIGHT: Drug Free Babies
Alcohol and Drug Treatment and Treatment Access	Drug Abuse Alternatives Center (DAAC)
	California Human Development (CHD)
	Kaiser Permanente Northern California Early Start Program
	Santa Rosa Community Health Centers
	SPOTLIGHT: Women's Recovery Services (WRS)
Community-based Prevention Collaborations and Coalitions	Sonoma County Task Force for the Homeless
	Sonoma Valley Coalition to Prevent Underage Drinking
	West County Coalition for Alcohol and Drug-Free Youth
	The Petaluma Coalition to Prevent Alcohol, Tobacco and Other Drug Problems

4. Barriers to Healthy Aging

People over 60 make up a larger proportion of the population of the county, state, and country than ever before. In Sonoma County, 13.9% of the population is 65 years or older. Sonoma County's senior population is projected to grow to 143,636 by 2030 when it will represent nearly a quarter (24%) of the county's total population. This growth will have major implications for both individual and community life. It will challenge families and community organizations to provide the supports seniors need to stay healthy, safe, engaged and independent. Current senior service "systems" are fragmented, under-funded and often difficult for seniors and their families to understand and utilize. Low-income seniors are especially at risk for neglect, abuse and isolation. Lack of adequate, local supportive services often result in early institutionalization, poor health outcomes and reduced quality of life for many vulnerable seniors.

Why this issue/condition is important in Sonoma County:

Population Growth	Sonoma County's senior population is projected to grow from 102,639 in 2012 to 128,589 in 2020, with the fastest growth in the 70–74 age group—the baby boom "age wave." This age wave, combined with increased longevity, will continue to drive escalating growth in senior populations, especially in the 75 and over age group. Sonoma County's current health care and social service infrastructure is inadequate, especially in outlying communities, to meet the needs of this growing population of aging seniors.
Mortality	For those 60 years and older, the death rate for falls is higher than the California rate and almost three times the Healthy People 2020 goal.
Health Indicators	• For many health indicators, Sonoma County older residents' health status fares poorly in comparison to their peers in California or the Healthy People 2020 targets. • 22% of seniors aged 65 and older have incomes less than 200% of FPL; for seniors over age 75, the percentage rises to 27%. • Among seniors aged 65 and older, 30% live alone, representing 38.4% of the women and 18.9% of the men in this age group.
Benchmark	• Among those age 60 and older, 44,000 (47%) individuals report having been diagnosed with hypertension as compared with the Healthy People 2020 goal of 26.9%.
Health Disparity	• 88.5% of seniors with incomes above 200% FPL report good or better health as compared with 63.1% of those with annual income below this level • Geographic and social isolation create significant barriers in 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.

How this issue is identified as a priority:

Key Informants	Among key informants, 5 of 18 identified seniors, emphasizing low income and isolated seniors as the population with the greatest challenges in maintaining their health.
CHNA Priority Setting Process	Barriers to healthy aging were identified as a priority during the CHNA Priority Setting Process.
Selection Criteria	Barriers to healthy aging meet the priority selection criteria for links to chronic disease, disparities in health status, potential for health improvement based on local intervention, and opportunities for prevention approaches.

Community assets and resources and assets:

The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive. In some instances specific programs are "spotlighted' as representative of similar programs or services available in the county.

Resource Category	Asset
Support Services	Sonoma County Area Agency on Aging (SCAAA) – Division of Aging
	SCAAA Advisory Council
	Council on Aging
	Community and Family Service Agency - West County
	Petaluma People Services Center (PPSC)
	Jewish Family and Children's Services
	Redwood Empire Food Bank Senior Security Program
	SPOTLIGHT: Matter of Balance
	SPOTLIGHT: Senior Centers
Collaborations	The Older Adult Collaborative (OAC)
Care Coordination	Senior Advocacy Services
	Health Insurance and Advocacy Program (HICAP)
	SPOTLIGHT: Coleman Care Transitions Intervention
Mental Health Services	Family Service Agency Senior Peer Counseling Services
Transportation	Sonoma County Para Transit
	SPOTLIGHT: Sebastopol Senior Center – Transportation Services

5. Gaps in Access to Mental Health Services

Good mental health plays a crucial role in the health and well being of individuals and their communities. Mental health disorders can interfere with healthy social functioning and create significant burdens on individuals, families, and communities. Mental health disorders vary in severity and in their impact on people's lives. Many behavioral health problems can be effectively treated. Early detection, assessment, and links with treatment and supports can help prevent mental health problems from worsening. However, many individuals with mental health concerns do not have access to the treatment they need based on income and on lack of available services. Insufficient private insurance coverage for behavioral health services and insufficient availability of publicly funded treatment services are significant barriers for many who seek mental health services and supports in Sonoma County. Lack of an integrated approach to mental health within the health care system can lead to missed opportunities for early problem identification and prevention.

Why this issue is important in Sonoma County:

Scope and Scale	• According to estimates compiled by the Sonoma County Department of Health Services, approximately 70,000 – 80,000 individuals (14% of total population) are currently uninsured for health care. Many others who have individual or employer based health insurance lack affordable access to mental health services because such services are excluded from coverage.
Benchmark	• Nearly one-fifth (19.6%) of Sonoma County adults 18-59 reported needing help for emotional/mental health problems or use of alcohol or drugs as compared to 16.1% in California. • More Sonoma County residents age 60 and older stated that they need help for mental health issues than Californian seniors as a whole (10.5% vs. 7.4%). • The overall Sonoma County death rate from suicide for all age groups (14/100,000) exceeds both the California rate (9.7%) and the Healthy People 2020 rate (10.2%). The death rate from suicide for adults ages 18-59 in Sonoma County (18.6%) is higher than the California rate (12.0%) and the Healthy People 2020 target (10.2%). The death rate from suicide for seniors in Sonoma County (20.8%) is higher that the California rate (15.9%) and nearly twice the Healthy People 2020 target (10.2%).
Health Indicators	• Depression during pregnancy and the first year after the birth of a child affects more than one in eight women. Lack of treatment can have a profound impact on women and their families, interfering with maternal-infant bonding and contributing to developmental and behavioral problems in young children.
Health Disparity	• Low-income individuals experience severe limitations in access to affordable mental health services and report more mental health problems than those with higher incomes. Information gathered through the 2012 St. Joseph Health System Behavioral Risk Factor Survey highlights disparities in self-reported

	mental health status. Among respondents living under 200% of Federal Poverty Level (FPL), 40.2% reported "excellent" or "very good" mental health as compared with 71.2% of those with higher incomes. Among those living below FPL, over 30% report "fair" or "poor" mental health. • Treatment and support resources for low-income children, teens, adults, and seniors are severely limited in Sonoma County, with specific needs for culturally competent outpatient services, and for more basic mental health services in outlying communities. Recent and continuing reductions in the publicly funded safety net of mental health services and supports for low-income and others at-risk further threaten the well being of these vulnerable populations.

How this issue is identified as a priority:

CHNA Priority Setting Process	Gaps in access to mental health services were identified as a priority during the CHNA Priority Setting Process.
Selection Criteria	Gaps in mental health services were selected as a focus area because this meets priority selection criteria for scope and scale, disparities in health status, potential for health improvement based on local intervention, and opportunities for prevention approaches.
Key Informants	Eight of 18 key informants identified improved integration of primary care and behavioral health as a top health issue in Sonoma County.

Community resources and assets:

The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive. In some instances specific programs are "spotlighted' as representative of similar programs or services available in the county.

Resource Category	Assets
Health Care Reform	Affordable Care Act
Sonoma County Department of Health Services	Behavioral Health Division
	Mental Health Services for Children and Families
	Sonoma Health Action
	Community Intervention Program
	Early Psychosis Detection and Training
	North Bay Suicide Prevention Project
Mental Health Services Act - Supported Programs	Mental Health Services Act
	SRJC Prevention and Early Intervention (PEI)

Resource Category	Assets
	SPOTLIGHT: Community and Family Service Agency - West County
	SPOTLIGHT: Triple P Positive Parenting Program
Community Health Centers	Redwood Community Health Coalition (RCHC)
Community Based Organizations	Council on Aging
	National Alliance of Mental Illness (NAMI)
	SPOTLIGHT: Sonoma County Adult and Youth Development (SCAYD)
	SPOTLIGHT: Positive Images
Coalitions and Collaborations	The Mental Health Coalition of Sonoma County
	The Older Adult Collaborative (OAC)
	Sonoma County Perinatal Mental Health Partnership
	Early Childhood Mental Health Collaborative
	The Sonoma County Student Assistance Program Collaborative
Consumer Input and Engagement	Sonoma County Mental Health Board

6. Disparities in Educational Attainment

Educational attainment is the single greatest predictor of both income and employment status in later life. As the economy continues to shift toward jobs that require workers to have greater analytical and interactive skills and specialized training, those who do not finish high school are far less likely than better educated workers to succeed in finding employment. Low levels of education are linked to poor health outcomes and disparities in access to care.

Why this issue/condition is important in Sonoma County:
In Sonoma County, levels of educational attainment vary modestly by gender but significantly by ethnicity, with Hispanics currently lagging behind their White counterparts in attainment at all levels. Just over 6% of Whites do not have a high school diploma as compared with 45.9% of the Hispanic population. Among current students In Sonoma County, 93.6% of White 9th graders graduate from high school 4 years later as compared with only 64.4% of Latino students.

How this issue is identified as a priority:

CHNA Priority Setting Process	Disparity in educational attainment was identified as a priority during the CHNA Priority Setting Process and highlighted in the Data Profile as a leading contributor to unemployment and poverty and as a social determinant of poor

	health outcomes.
Selection Criteria	Disparities in educational attainment meet priority selection criteria for scope and scale, disparities in health status, potential for improvement based on local intervention, and opportunities for prevention approaches.
Key Informants	Fifteen of eighteen key informants identified educational attainment as one of the most critical issues facing Sonoma County. Education was also mentioned, along with income, as a major driver for chronic diseases and obesity.

Community resources and assets:

The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive. In some instances specific programs are "spotlighted' as representative of similar programs or services available in the county.

Resource Category	Asset
Sonoma County Department of Health Services	Health Action Cradle to Career
	First 5 – Sonoma County
Early Childhood Education and Child Care	Child Care Planning Council
	4 Cs - Community Child Care Council of Sonoma County
	Head Start Programs **SPOTLIGHT:** SCOE Preschool
Mentoring Programs	Sonoma County Mentor Programs
	SPOTLIGHT: Mentor Me Petaluma
	SPOTLIGHT: The Sonoma Valley 'Stand by Me' Mentoring Alliance
College and Career Readiness	High School Career Programs
	North Bay Leadership Council
	SPOTLIGHT: Sonoma County Office of Education (SCOE) – Aiming High
	SPOTLIGHT: Santa Rosa Chamber – Algebra Academy
	SPOTLIGHT: Casa Grande High School – Small Learning Communities
	SPOTLIGHT: AVID
	SPOTLIGHT: 10,000 Degrees
Intervention and Support Programs	Sonoma County Adult Literacy Program
	California Parenting Institute (CPI)
	SPOTLIGHT: Schools of Hope-Sonoma County

Resource Category	Asset
	SPOTLIGHT: AVANCE
	SPOTLIGHT: Reach Out and Read
Workforce Development	Santa Rosa Junior College (SRJC) Hope Center
	Workforce Development Roundtable

7. Cardiovascular Disease (Stroke, Diabetes)

Cardiovascular disease (CVD) is a group of disorders of the heart and blood vessels, including coronary heart disease, cerebrovascular disease (stroke), elevated blood pressure (hypertension), peripheral artery disease, rheumatic heart disease, congenital heart disease, heart failure, some types of kidney disease, and diabetes. Major behavioral contributors to cardiovascular disease include tobacco use, harmful use of alcohol, obesity, physical inactivity, unhealthy diet and stress.

Why this issue/condition is important in Sonoma County:

Morbidity and Mortality	• Cardiovascular disease is the third leading cause of death for people ages 18-59 in Sonoma County. For residents, age 60 and older, coronary heart disease and stroke are the second and third most common cause of death, behind cancer.
Benchmark	• The death rate due to coronary heart disease (630.2/100,000) is more than six times the Healthy People 2020 target of 100.8/100,000. • The percentage of people 60 and older with hypertension (47%) is significantly higher than the Healthy People 2020 target of 26.9%.

How this issue is identified as a priority:

CHNA Priority Setting Process	Cardiovascular disease, specifically stroke and diabetes, was identified as a priority during the CHNA Priority Setting Process.
Selection Criteria	Stoke and diabetes were selected as focus areas because they meet priority selection criteria of scope and scale, benchmark issue, links to chronic disease, potential for health improvement based on local intervention, contribution to health disparities, and opportunities for prevention.
Key Informants	Key informants identified contributors to cardiovascular disease i.e., poor nutrition and sedentary lifestyle, and other unhealthy behaviors as key health concerns.
Focus Groups	Among focus group participants, diabetes and high blood pressure were highlighted as important issues affecting the health of their community.

Community assets and resources and assets:
The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive. In some instances specific programs

Resource Category	Asset
Patient Care - Treatment Services	Redwood Community Health Coalition (RCHC)
	Patient Centered Medical Home
	Hospital-Based Specialty Services
Intervention and Support Services	Healthy Eating and Physical Fitness
	Sonoma County Family YMCA
	Northern California Center for Well Being
	Children's Diabetes Foundation
	SPOTLIGHT: Redwood Empire Food Bank
	SPOTLIGHT: YMCA of Sonoma County
	SPOTLIGHT: Sweet Success
Resources	American Heart Association (AHA)
	American Lung Association in California

8. Adverse Childhood Experiences (ACES)

"Adverse childhood experiences (ACES)," a variety of ongoing conditions or events that can be categorized as recurrent childhood trauma, have been documented to lead to health and social problems, risk-taking behaviors and a shortened lifespan for the adults who survive them. ACES include verbal, physical, or sexual abuse; an incarcerated, mentally ill, or substance-abusing family member; domestic violence; absence of a parent because of divorce or separation; or other types of serious family dysfunction. ACES have been linked to a range of adverse health outcomes in adulthood, including substance abuse, depression, cardiovascular disease, diabetes, cancer, and premature mortality.

Why this issue/condition is important in Sonoma County:

Incidence and Prevalence	• While local data are not available on the incidence and prevalence of ACES, data from the 2009 ACE module of the Behavioral Risk Factor Surveillance System (BRFSS), demonstrate that, overall, 59.4% of respondents reported having at least one ACE, and 8.7% reported five or more ACEs. • While one or two ACES may represent minimal risk for many children, those

	who experience multiple ACES during childhood are at heightened risk for health and social problems in their teen and adult years. • The prevalence of ACES underscores the need for additional efforts at the state and local levels to reduce and prevent child maltreatment and associated family dysfunction and the need for further development and dissemination of trauma-focused services to treat stress-related health outcomes associated with ACES.

How this issue is identified as a priority:

CHNA Priority Setting Process	Adverse childhood experiences were identified as a medium priority during the CHNA Priority Setting Process.
Selection Criteria	ACES meet the priority selection criteria for links to chronic disease, potential for health improvement based on local intervention, and opportunities for prevention approaches.
Key Informants	One key informant identified ACES as a significant health concern.

Community Resources and Assets: The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive. In some instances specific programs are "spotlighted' as representative of similar programs or services available in the county.

Resource Category	Asset
Sonoma County Department of Health and Human Services	Sonoma County DHS Maternal, Child and Adolescent Health Program
	First 5 – Sonoma County
	Perinatal ACES Collaborative
	Child Protective Services & Child Welfare Services
Intervention Services	Child Protective Services (CPS)
	Family Justice Center
	Court Appointed Special Advocates (CASA)
	California Parenting Institute (CPI)
	SPOTLIGHT: Valley of the Moon Children's Home
	SPOTLIGHT: Social Advocates for Youth
Safety Net Services	YWCA of Sonoma County
	YWCA – A Special Place Preschool Therapeutic preschool

Resource Category	Asset
	Committee on the Shelterless (COTS)

9. Access to Health Care Coverage

Insuring access to affordable, quality health care services is important to protecting both individual and population health, eliminating health disparities and promoting overall quality of life in the community. While many individuals face significant barriers to care – geographic, cultural and language barriers, for example – foremost among them are financial barriers. The cost of both routine and emergency care for uninsured patients can be financially devastating. Individuals without health care insurance coverage may defer needed care, diagnostics and medicines for themselves and their families and may, as a result, experience higher rates of preventable illness, suffering, disability and mortality than those who have affordable health care coverage. With implementation of the Affordable Care Act, it is anticipated that a significant portion of Sonoma County's uninsured population will be eligible for more affordable health care coverage under expanded Medicaid programs or newly developed Health Exchange insurance plans.

Why this issue/condition is important:

Prevalence	• The Sonoma County Department of Health Services estimates that 70,000 – 80,000 individuals (14% of total population) are currently uninsured. • Many others who have health care coverage are considered "underinsured," which means they lack access to essential health care services such as dental, mental health or specialty care because their insurance does not cover these services or does not pay at a level that local health care providers accept.
Health Disparity	• More respondents with incomes below Federal Poverty Level (FPL) reported difficulty finding medical care "when they needed it" than did those living at 200% FPL and above (5.3%/23%). Among adults with incomes between 100-200% of FPL, over 15% reported similar difficulty. Over 25% of those with incomes below 200% FPL reported that they did not get "a prescription medicine that they needed" during the past year because they could not afford it while 5.8% of those reporting higher incomes did. • Low-income individuals, many of whom lack health care coverage, experience significant disadvantages in accessing health care services. Financial barriers may still be problematic for low-wage earners with incomes too high to qualify for Medi-Cal but too low to meet premium requirements. And, under the ACA, undocumented individuals will continue to be ineligible for publicly-funded coverage, leaving many individuals and families vulnerable.

How this issue is identified as a priority:

CHNA Priority Setting Process	Access to health care coverage was identified as a priority health issue during the community priority setting process.
Selection Criteria	Access to health care coverage was selected as a focus area because it meets priority selection criteria for scope and scale, links to chronic disease, potential for health improvement based on local intervention, and contribution to health disparities.
Key Informants	Among key informants 12 of 18 raised access to primary care services as the most critical issue facing the community. 4 of 18 key informants noted that increasing access to care is important to people with chronic diseases.
Focus Groups	Participants in the focus groups identified a number of barriers to health care access in their community including low wages, lack of transportation, limited health insurance and minimal preventive care for the uninsured.

Community assets and resources:

The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive.

Resource Category	Assets
Community Health Centers	Redwood Community Health Coalition (RCHC)
Health Care Coverage	The Affordable Care Act - Health Exchanges
	Healthy Kids Sonoma County
	Sonoma County Expanded Coverage Initiative (ECI)
	Kaiser Permanente Child Health Plan
	The County Medical Services Program (CMSP)
County Wide Initiatives	Health Insurance Advocacy and Counseling Program (HiCAP)
	Comprehensive Perinatal Services Program (CPSP)

10. Tobacco Use

Nationally, tobacco use causes almost half a million premature deaths each year. Approximately one-third of all tobacco-using Americans will die prematurely from lung cancer, emphysema, cardiovascular disease and other causes related to their dependence on tobacco. Chewing tobacco is a principal contributor to oral cancers. Exposure to secondhand smoke can cause or exacerbate a wide range of health conditions including cancer, respiratory infections, and asthma. Most smokers become addicted before the age of 19. Those who start smoking young are more likely to have difficulty quitting and more likely to develop smoking-related illness and disability. Tobacco use during pregnancy can lead to miscarriage, premature birth, low birth weight, and infant death.

Why this issue/condition is important in Sonoma County:

Benchmark	• The Healthy People 2020 target for the percentage of adults aged 18 years and older that smoke cigarettes is 12.0%. Sonoma County's adult smoking rate does not meet this target and is higher than the California average. • Smoking rates for teens also exceed both national and state-level benchmarks. Approximately 16% of 11th graders and 11% of 9th graders identify as current smokers.
Health Disparity	• Tobacco use disproportionately affects low-income populations - 20.1% of lower income adults report smoking cigarettes in the past 30 days as compared with 8.9% of higher income adults.

How this issue is identified as a priority:

CHNA Priority Setting Process	Tobacco use was identified as a priority during the CHNA Priority Setting Process and was highlighted in the Data Profile as a leading cause of morbidity and mortality.
Selection Criteria	Tobacco use meets priority selection criteria for scope and scale, benchmark issue (smoking), link to chronic disease, contribution to health disparities, potential for health improvement based on local intervention, and opportunities for prevention approaches.
Key Informants	Several key informants identified tobacco use as a risk factor for chronic diseases, low-birth weight and pediatric asthma.

Community assets and resources:

The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive. In some instances specific programs are "spotlighted' as representative of similar programs or services available in the county.

Resource Category	Assets
Resources	American Lung Association (ALA)
	Work site Wellness Programs
Prevention Coalitions	Sonoma County Asthma Coalition
	Coalition for a Tobacco Free Sonoma County
Programs and Services	Sonoma County Tobacco Use Prevention
	Tobacco Use Prevention Education (TUPE)
	Northern California Center for Well Being
	California Rural Legal Assistance
	SPOTLIGHT: Kaiser Permanente
	SPOTLIGHT: Smoke Free Babies Program

11. Coordination and Integration of Local Health Services

Integration of health care services may take a variety of forms, but essentially consists of the coordination of care to reduce fragmentation and unnecessary use of services, prevent avoidable conditions, and promote independence and self-care. Single, categorical services provided to persons with multiple related risks may miss opportunities to diagnose, treat, and prevent disease.

In a report to the Commonwealth Fund, care management was identified as one of few policy options to contain costs while improving health outcomes for high-risk populations. Care management is at the core of the Patient Centered Medical Home approach which shifts focus from episodic acute care to managing the health of defined populations, especially those living with chronic health conditions. In the Patient-Centered Medical Home model, the primary care clinical team acts as the case manager and facilitator to assure that patients receive the full spectrum of diagnosis-specific health care services and supports, both from within and without the medical home. Critical transitions from hospital to skilled nursing to home are case managed to assure positive health outcomes. The clinical care team is supported by information technologies, such as health information exchange, to assure that patients get appropriate care when and where they need and want it in a culturally and linguistically appropriate manner.

Why this issue/condition is important in Sonoma County:
As the Affordable Care Act expands health care coverage options for more Sonoma County residents, making available to them a more comprehensive range of services, increased emphasis must be placed on coordination and integration of these services. To maximize resources and provide high quality health care for newly insured patients and those already

established in care, local health care services must be better coordinated and integrated with an emphasis on those most vulnerable – the aged, those living in poverty or geographic isolation and those with multiple disabilities.

Broad adoption of the patient centered medical home model, case management and patient navigator services, greater use of technology and other approaches to enhanced care coordination will offer opportunities to implement effective prevention and better identify, manage and improve outcomes for those with chronic disease.

The county's network of community health centers, social services providers and community hospitals have a long history of collaboration to improve health outcomes that can be leveraged to accomplish this goal. Successful efforts to expand adoption of the medical home model; integrate behavioral health services within community health centers; improve hospital-to-home transitions for patients, link chronic patients with health promotion resources in local communities; outstation and co-locate health and social services for geographically isolated populations and address communitywide needs for healthcare-related transportation, language assistance, and community education have created a strong foundation upon which to build.

How this issue is identified as a priority:

CHNA Priority Setting Process	Coordination and integration of the local health care system was identified as a priority health issue during the CHNA Priority Setting Process.
Selection Criteria	Coordination and integration of the local health care system meets priority selection criteria for scope and scale, links to chronic disease, contribution to health disparities, potential for health improvement based on local intervention, and opportunities for prevention approaches.
Key Informants	12 of 18 key informants identifying collaboration as a countywide strength that needs to be maintained, especially in anticipation of Health Care Reform. Ten key informants discussed health care system improvement, effectively implementing the patient centered medical home and the appropriate allocation of resources such as use of multi-level professional care teams, and integration of primary care and mental health services. Additional mention was made of the work to develop palliative care options, and the policy work on the use of prescription drugs. Key informants emphasized the need to continue the work of the Community Health Improvement Committee (CHIC), Health Action, the Care Transitions Project, the Healthy Eating Active Living Initiative (HEAL), and other upstream approaches now underway.
Focus Groups	Ten of nineteen focus group participants identified more collaboration among public and private entities as the most important issue facing their community.

Community resources and assets:
The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive.

The county's network of community health centers, social services providers and community hospitals have a history of collaboration to improve health outcomes that can be leveraged to accomplish this goal.

Resource Category	Asset
Patient Care – Treatment Services	Redwood Community Health Coalition (RCHC)
	Sonoma Medical Association (SCMA)
Health Care Reform	Accountable Care Organizations (ACOs)
Countywide Initiatives	Health Action - iCare – Excellence in Health Care
Care Transitions	Care Transitions Group
Workforce Development	Santa Rosa Family Medicine Residency
	Kaiser Residency Program
	Sonoma State Patient Navigator Certificate Program

12. Disparities in Oral Health

Good oral health – healthy mouth, teeth and gums - is essential to overall health. Poor oral health can threaten the health and healthy development of young children and compromise the health and wellbeing of adults. Conditions of the mouth, teeth, gums and throat, from dental caries to cancer, cause pain and disability for millions of Americans each year. Oral disease is largely preventable with timely assessment and preventive care. Fluoridated drinking water has proven to be an effective public health measure for prevention of tooth decay, yet only 3% of the public water supply in Sonoma County is fluoridated. Among the cities, only Healdsburg fluoridates its water. While many children and adults in Sonoma County enjoy good oral health and access to high-quality dental care, too many children in our community are unable to eat, sleep or learn because of painful, untreated decay. Many adults are seeking emergency room care for urgent dental conditions that could have been prevented with access to basic dental care.

Why this issue/condition is important in Sonoma County:

Prevalence	In 2010, over 838 low-income Sonoma County children received hospital dentistry services at the PDI Surgery Center, to treat caries that were either so numerous or so severe that they could not be treated without general

	anesthesia.
Health Disparity	Low-income adults and children suffer disproportionately from poor oral health largely because of limited access to affordable prevention-focused oral health care.

How this issue is identified as a priority:

CHNA Priority Setting Process	Disparities in oral health were identified as a priority health issue during the CHNA Priority Setting Process.
Selection Criteria	Oral health disparities meet the priority selection for scope and scale, contribution to health disparities, potential for health improvement based on local intervention, and opportunities for prevention approaches.
Key Informants	Four of eighteen key informants identified disparities in oral health as a critical issue, while several noted that integrating oral health assessment and referral into routine primary care would improve oral health.
Behavioral Health Risk Survey	Information gathered through the 2012 St. Joseph Health System Behavioral Risk Factor Survey documents disparities with regard to dental care access. Seventy-seven percent (77%) of survey respondents with incomes at 200% of FPL or higher reported having had their teeth cleaned by a dentist or dental hygienist within the past year, as compared with 47% of those with incomes below that level. Among respondents living below FPL, only 35% report cleaning within the past year; 16% report not having had their teeth cleaned in the past 5 years; and 11% report never having had them cleaned.

Community resources and assets:

The community asset mapping process generated a list of community resources and programs in Sonoma County. The list is not comprehensive. In some instances specific programs are "spotlighted' as representative of similar programs or services available in the county.

Resource Category	Assets
Dental Services	RCHC - Community Based Dental Clinics
	St Joseph Health – Mobile Dental Clinic
	St Joseph Health-Dental Clinic
	First 5 Sonoma County
	Pediatric Dental Initiative (PDI)
	SPOTLIGHT: Santa Rosa Sunrise Dental Clinic

Resources	Healthy Kids Sonoma County
	Redwood Empire Dental Society (REDS)
	North Bay Regional Center
Collaborations	Sonoma County Oral Health Task Force
	Sonoma County Oral Health Access Coalition (SCOHAC)
Prevention Programs	Women Infants and Children (WIC) Program
	Registered Dental Hygienist Alternative Practice (RDHAP)
	SPOTLIGHT: Save Our Smiles
	SPOTLIGHT: Mommy and Me
	SPOTLIGHT: Mighty Mouth
	SPOTLIGHT: Give Kids a Smile
Professional Training Workforce Development	Santa Rosa Junior College (SRJC)

13. Cancer (Lung, Breast, and Colorectal)

Cancer is a general name for a group of more than 100 diseases in which abnormal cells divide without control and are able to invade and damage healthy tissues. Cancer cells can spread to other parts of the body through the blood and lymph systems. Cancer is the second leading cause of death in the United States, exceeded only by heart disease.

The number of new cancer cases can be reduced, and many cancer deaths can be prevented. Research shows that screening for breast, cervical and colorectal cancers, as recommended, can increase detection of these cancers at an early and often treatable stage, thereby reducing morbidity and mortality.

Why this issue/condition is important in Sonoma County:

Morbidity and Mortality	Cancer is a leading cause of death in Sonoma County: the county exceeds the Healthy People 2020 target for all-cancer death rate. With the exception of stomach cancer, Sonoma County's all-cancer incidence - the number of new cases reported annually per 100,000 in population - is higher than the California rate. Lung cancer, with 234 annual deaths, is the leading cause of cancer death in Sonoma County, exceeding the state average. Other leading causes of cancer death are colorectal cancer, female breast cancer, and prostate cancer, all of which are higher than the California rate and do not meet Healthy People 2020 targets.

How this issue is identified as a priority:

CHNA Priority Setting Process	Cancer was identified as a priority during the CHNA Priority Setting Process and highlighted in the Data Profile as a leading cause of morbidity and mortality.
Selection Criteria	Lung, breast, and colorectal cancer were identified as a focus area because they meet priority selection criteria for scope and scale, benchmark issue (female breast cancer, lung and colorectal cancer), and opportunities for prevention approaches.

Community assets and resources:

The community asset mapping process generated the following list of resources, services and programs in Sonoma County. The list is not comprehensive. In some instances specific programs are "spotlighted' as representative of similar programs or services available in the county.

Asset	Resource
Support Services	American Cancer Society
	Cancer Registry
	Tumor Board
	North Bay Cancer Alliance
	Oncology Nursing Society
	SPOTLIGHT: Women's Cancer Awareness Group
Treatment Services	**Oncology Providers:** • Santa Rosa Memorial Hospital – Multidisciplinary Cancer Care • Sutter Medical Center of Santa Rosa – Oncology Center • Kaiser Permanente, Santa Rosa- Oncology Department
	Sonoma County Oncology Nurse Navigators: • Kaiser Permanente • Sutter Pacific Medical Foundation
	Redwood Regional Medical Group
	Kaiser Permanente Santa Rosa Breast Care Center
	Sutter Pacific Women's Health Center
	University of California San Francisco (UCSF)

VII. CONCLUSION AND NEXT STEPS

The purpose of the Community Health Needs Assessment (CHNA) process is to develop and document key information on the health and wellbeing of Sonoma County residents. The CHNA will be used by the hospital partners to develop community health benefit plans as required by the Affordable Care Act and the State of California. The Sonoma County 2013 CHNA will also be made available as a resource to the broader community. It is hoped that, in this way, the CHNA be a useful resource for further communitywide health improvement efforts.

Please visit www.healthysonoma.org <http://www.healthysonoma.org> for copies of each organization's implementation plan and for more information about community health issues in Sonoma County.