St. Joseph Health, Petaluma Valley

St. Joseph Health
Petaluma Valley

Community Health Needs Assessment Report*

The CHNA was made possible through a collaborative effort by Sutter Medical Center of Santa Rosa, St. Joseph Health– Sonoma County (Santa Rosa Memorial Hospital and Petaluma Valley Hospital), Kaiser Permanente Medical Center – Santa Rosa and the Sonoma County Department of Health Services

* Updated to align with The Patient Protection and Affordable Care Act (Pub. L. 111-148). The ACA added section 501(r) to the Internal Revenue Code, which imposes new requirements on non-profit hospitals. Section 501(r)(3) requires a hospital organization to conduct a community health needs assessment (CHNA) every three years and adopt an implementation strategy to meet the community health needs identified through such assessment. The CHNA must (1) take into account input from persons who represent the broad interests of the community served by the hospital facility, including those with special knowledge of or expertise in public health and (2) be made widely available to the public. Section 501(r)(3)(B). St. Joseph Health, Petaluma Valley relied on Notice 2011-52: *Notice and Request for Comments Regarding the Community Health Needs Assessment Requirements for Tax-Exempt Hospitals* to meet the requirements.

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MISSION, VISION AND VALUES

Our Mission
To extend the healing ministry of Jesus in the tradition of the Sisters of St. Joseph of Orange by continually improving the health and quality of life of people in the communities we serve.

Our Vision
We bring people together to provide compassionate care, promote health improvement and create healthy communities.

Our Values
The four core values of St. Joseph Health -- Service, Excellence, Dignity and Justice -- are the guiding principles for all we do, shaping our interactions with those whom we are privileged to serve.

INTRODUCTION – WHO WE ARE AND WHY WE EXIST

St. Joseph Health- Petaluma Valley, approximately 40 miles north of San Francisco just off the Highway 101 corridor in southern Sonoma County in the town of Petaluma, is an 80-bed acute care hospital. Its services include a 24-hour emergency department, intensive/coronary care unit, family birth center, inpatient medical/surgical unit, day surgery, imaging, laboratory, and respiratory, physical and occupational therapies. PVH forms part of St. Joseph Health's ministry in Sonoma County, which will be referred to in this document as SJH-SC, founded by the Sisters of St. Joseph of Orange, has been serving the healthcare needs of families in the community for more than 50 years. During this time, its mission has remained the same: to continually improve the health and quality of life of people in the communities served. Part of a 14-hospital health system serving California, west Texas and eastern New Mexico known as St. Joseph Health (SJH), SJH-SC operates two hospitals, St. Joseph Health-Petaluma Valley and St. Joseph Health-Santa Rosa Memorial, urgent care and community clinics, hospice, home health services, and other facilities for treating the healthcare needs of the community in Sonoma County and the region.

As a values based organization, St. Joseph Health has a long-standing commitment to the community it serves. SJH works under the premise of "Value Standards." SJH's Value Standard Seven: Community Benefit states, "We commit resources to improving the quality of life in the communities we serve, with special emphasis on the needs of the poor and underserved." Ten percent of the net income is dedicated to community benefit. SJH-SC has formed one countywide Community Benefit Department, which serves the service areas of both Petaluma Valley Hospital and Santa Rosa Memorial Hospital, where it is administratively housed. In Sonoma County, the Community Benefit Department integrates actions through Strategic Elements that address the political, social, behavioral and physiological determinants of health: Healthy Communities, Community Health and Advocacy. The primary strategies employed to address community needs are community capacity building, improving health outcomes for vulnerable populations and reducing social isolation of special populations.

ORGANIZATIONAL COMMITMENT

Community Benefit Governance and Management Structure

The trustees, executive management, physicians, employees of SJH-SC and surrounding community are all involved in providing on-going feedback/monitoring and informing the direction of policies and programmatic content of community benefit activities. In addition, community benefit plans, processes and programs reflect both the SJH strategic corporate and entity goals and objectives. In the section of this strategic plan included under "Community Outreach and Social Change" the following goals are listed which are reflected throughout our community benefit programming:

- Increasing cultural and linguistic competency of all services and programs.
- Strengthening the continuum of care within the community, in collaboration with community partners.
- Enhancing community access to specialty care by building or expanding relationships with community health centers and district hospitals.
- Continuing to provide mobile health and dental services.
- Advocating for health care programs and services that respond to identified community health care needs, specifically advocating for mental health and for expanded access and healthcare reform.
- Developing a countywide indigent care approach that engages all providers and increases access to care.
- Engaging the community to be involved in health and or quality of life issues.

St. Joseph Health - Sonoma County demonstrates organizational commitment to the community benefit process through the allocation of staff, financial resources, participation and collaboration. The Area Vice President of Mission Integration is responsible for coordinating implementation of Senate Bill 697 provisions as well as the opportunities for Executive Management Team, physicians and other staff to participate in planning and carrying out the Community Benefit Plan.

The Community Benefit Committee is a joint committee of the Boards of Trustees of Santa Rosa Memorial and Petaluma Valley Hospitals (SJH-SC entities), and supports these boards in overseeing community benefit activities in accordance with its Board approved charter. The Committee consists of at least three members of the Boards of Trustees and has a majority of members from the community who have knowledge or experience with populations with disproportionate unmet health needs in the communities served.

Our Community

Sonoma County is located north of the San Francisco Bay area and is the southwestern most county of California's wine region

The county is 1,575.88 sq. mi. and the physical geography represents a balance of redwood forests, viticulture and orchards. Nearly 62% of the land is agricultural with 250+ wineries in 11 distinct and two shared federally designated American Viticulture Areas. The population density is 307.1 persons per sq. mi. well above the state average of 238.9. Figure 1 is a visual representation of St. Joseph Health Santa Rosa (to the North) and St. Joseph Health, Petaluma Valley (to the South).

Figure 1. St. Joseph Health, Santa Rosa Memorial and St. Joseph Health, Petaluma Valley

In 2005 Dignity Health, in partnership with Thomson Reuters, pioneered the nation's first standardized Community Need Index (CNI). The CNI identifies the severity of health disparity for every zip code in the United States and demonstrates the link between community need, access to care, and preventable hospitalizations. The ability to pinpoint neighborhoods with significant barriers to health care access is an important advancement for public health advocates and care providers.
The CNI aggregates five socioeconomic indicators that contribute to health disparity (also known as barriers).
Barriers

1. Income: elder poverty, child poverty and single parent poverty
2. Culture: non Caucasian Limited English
3. Education: without HS diploma
4. Insurance: unemployed and uninsured
5. Housing: renting percentage

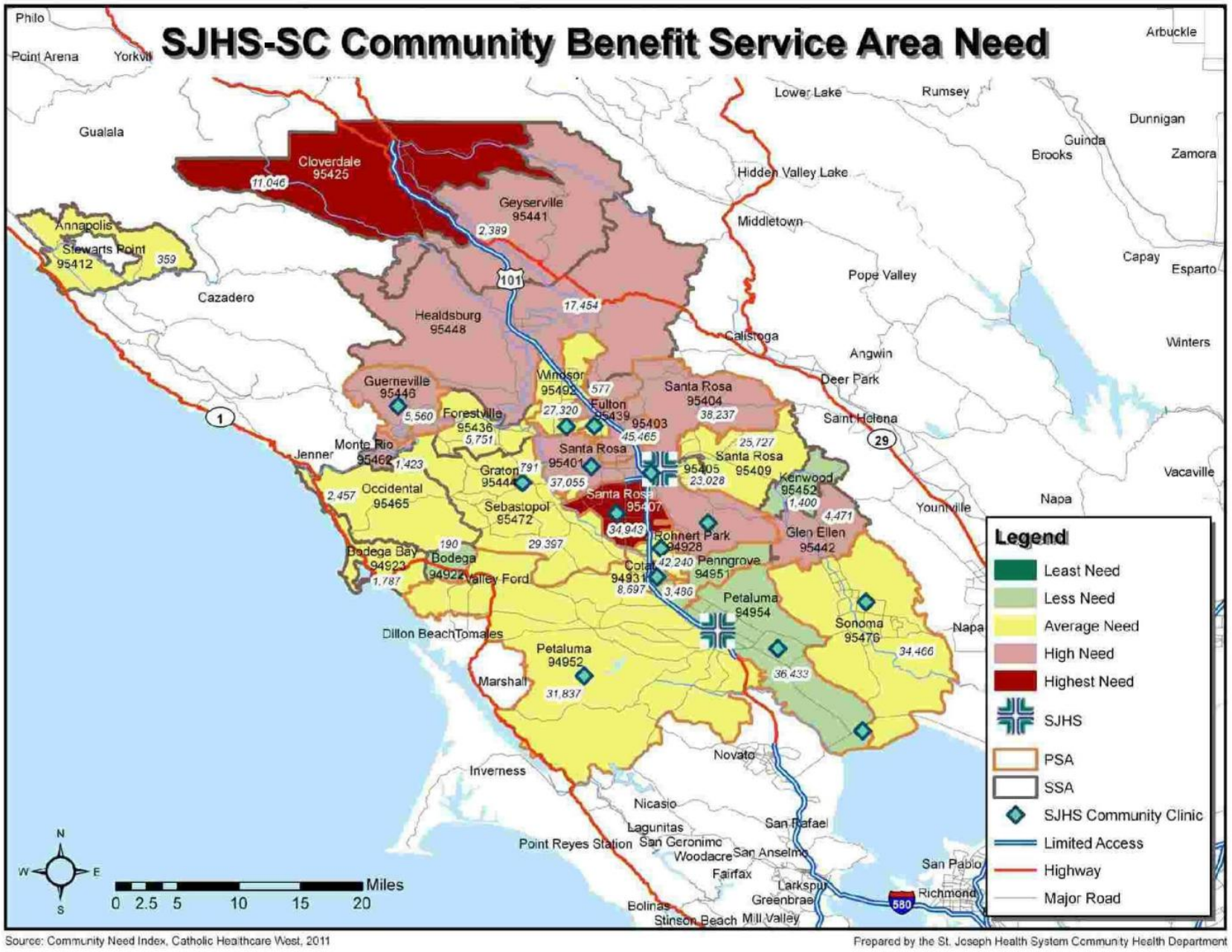
CNI demonstrated need at the zip code level where each zip code is assigned a score from 1 (low need) to 5 (high need) for each barrier. For barriers with more than one measure, the average is used as the barrier score. Once each zip code is assigned a score from 1 to 5 for each of the five barriers, the average score is calculated to yield the CNI.

While there are pockets of significant unmet need throughout the area, the map of the SJHS-SC Community Benefit service area notes the "hot spots" of need: northern Sonoma County, South Santa Rosa, unincorporated Sonoma Valley and Guerneville.

Community Served

Petaluma Valley has defined both a primary and a secondary Community Benefit Service Area (CBSA), reflective of the areas of greatest priority and lesser priority. The secondary CBSA is reflective of the hospital's local service area, and the primary CBSA reflects the pockets of greatest vulnerability and health inequity and demand for support. Given the countywide nature of St. Joseph Health – Sonoma County's Community Benefit work, the areas of greatest need not identified as a primary CBSA for St. Joseph Health, Petaluma Valley have been included in Santa Rosa Memorial's CBSA. Those areas are defined by zip code in the following table:

MINISTRY	City	Zip code	Community Benefit Primary or Secondary Service Area	Description of criterion used to determine ministry CB-SA Primary Service Area and Secondary Service Area
SJH-SC (Petaluma and Santa Rosa)	Penngrove	94951	Secondary	Concentration of: • low-income residents; • Latino residents; or • immigrant residents; or • asset-poor neighborhood.
	Petaluma	**94952**	**Primary**	
		94954	**Primary**	
	Cotati	**94931**	**Primary**	
	Rohnert Park	**94928**	Secondary	
	Santa Rosa	**95401**	Secondary	
		95403	Secondary	
		95404	Primary	
		95405	Secondary	
		95407	Secondary	
		95409	Secondary	
	Fulton	95439	Primary	
	Kenwood	95452	Secondary	
	Glen Ellen	95442	Secondary	
	Vineburg	95487	Secondary	
	Boyes Hot Springs	**95416**	Secondary	
	Eldridge	**95431**	Secondary	
	El Verano	**95433**	Secondary	
	Schellville	**95476**	Secondary	
	Graton	**95444**	Secondary	
	Guerneville	**95446**	Secondary	
	Windsor	**95492**	Secondary	
	Sebastopol	95472	Secondary	
	Forestville	95436	Secondary	
	Bodega	94922	Secondary	
	Bodega Bay	94923	Secondary	
	Occidental	95465	Secondary	
	Duncans Mills	95430	Secondary	
	Villa Grande	95486	Secondary	
	Monte Rio	95462	Secondary	
	Camp Meeker	95419	Secondary	
	Rio Nido	95471	Secondary	
	Healdsburg	95448	Secondary	
	Cloverdale	95425	Secondary	
	Annapolis	95412	Secondary	
	Geyserville	95441	Secondary	



Source: Community Need Index, Catholic Healthcare West, 2011

Prepared by the St. Joseph Health System Community Health Department

Community Profile by City

	PSA										
	Cotati	Fulton	Graton	Guernville	Petaluma	Rohnert Park	Santa Rosa	Windsor	Sonoma County	CA	U.S.
Population	8,697	577	791	5,560	68,280	42,240	204,455	27,320	477,667	37,853,428	309,038,999
Average HH Size	2.32	NA	NA	NA	2.62	2.51	2.53	3.02	2.53	2.91	2.60
Age (%)											
0-17	22.41	23.57	20.48	15.97	23.57	22.00	22.69	28.14	22.10	25.48	24.26
65+	9.62	10.23	10.24	11.69	12.40	9.23	14.22	10.57	13.73	11.45	13.16
Race/Ethnicity (%)											
White	70.88	66.20	64.98	79.06	71.46	67.50	61.77	63.24	66.79	40.91	64.71
Latino	17.87	19.93	30.34	13.08	19.48	18.34	27.26	30.05	23.90	37.11	15.82
African American	1.90	3.47	0.25	0.79	1.09	1.68	2.17	0.77	1.46	5.89	12.07
Asian	4.22	6.24	1.39	1.15	4.18	6.99	4.25	2.46	3.63	12.07	4.35
All Others	5.14	4.16	3.03	5.92	3.79	5.50	4.55	3.49	4.22	4.02	3.05
Foreign born (%)	8.8	NA	NA	NA	17.9	15.8	19.5	13.7	16.3	26.8	12.4
Not U.S. Citizen	247	NA	NA	NA	5,680	3,032	20,352	1,958	47,614	5,446,823	21,425,851
Spanish- Primary Language Spoken at Home (%)	4.2	NA	NA	NA	17.2	13.7	20.9	20.8	17.4	28.2	12.1
25+ with no HS diploma (%)	12.81	10.99	15.84	10.52	11.33	9.78	14.94	15.36	13.52	19.75	15.27
% HH with Gross Rent ≥35% Income	34.0% of 1,187	NA	NA	NA	45.4% of 6,139	47.4% of 6,744	44.8% of 25,138	36.0% of 1,920	44.6% of 61,952	45.0% of 4,876,882	41.0% of 34,472,293
% Children Below Poverty	5.6	NA	NA	NA	7.5	8.5	15.7	9.4	12.2	18.3	18.6
% 65+ Below Poverty	0.0	NA	NA	NA	5.5	5.9	6.8	5.4	5.5	8.4	9.8
% Families Below Poverty	2.6	NA	NA	NA	3.4	5.0	8.3	5.1	5.9	9.8	9.9
Female Headed HH with Children <18 (%)	6.5	NA	NA	NA	5.1	6.8	6.7	6.4	5.7	7.1	7.3

HH: Household
NA: Not Available
Source: American Community Survey 2005-2009, Claritas 2010

Community Profile by City (continued)

	SSA									
	Annapolis	Bodega	Bodega Bay	Cloverdale	Forestville	Geyserville	Glen Ellen	Sonoma County	CA	U.S.
Population	359	190	1,787	11,046	5,751	2,389	4,471	477,667	37,853,428	309,038,999
Average HH Size	NA	NA	1.98	2.55	2.29	NA	2.10	2.53	2.91	2.60
Age (%)										
0-17	14.21	10.53	13.88	23.45	17.35	20.64	15.54	22.10	25.48	24.26
65+	27.30	24.21	22.55	14.87	12.85	11.47	12.64	13.73	11.45	13.16
Race/Ethnicity (%)										
White	74.09	78.42	74.87	59.70	82.58	49.31	80.38	66.79	40.91	64.71
Latino	20.89	15.26	18.97	35.45	10.69	45.71	11.30	23.90	37.11	15.82
African American	0.84	0.53	0.56	0.12	0.89	0.25	1.95	1.46	5.89	12.07
Asian	0.84	2.11	1.45	1.02	1.43	0.29	3.15	3.63	12.07	4.35
All Others	3.34	3.68	4.14	3.70	4.42	4.44	3.22	4.22	4.02	3.05
Foreign born (%)	NA	NA	22.1	18.0	3.3	NA	3.3	16.3	26.8	12.4
Not U.S. Citizen	NA	NA	102	1,021	44	NA	7	47,614	5,446,823	21,425,851
Spanish- Primary Language Spoken at Home (%)	NA	NA	7.6	23.1	6.5	NA	10.6	17.4	28.2	12.1
25+ with no HS diploma (%)	8.01	8.13	10.56	22.41	7.68	32.03	27.15	13.52	19.75	15.27
% HH with Gross Rent ≥35% Income	NA	NA	100% of 43	50.4% of 1,101	36.1% of 155	NA	61.7% of 175	44.6% of 61,952	45.0% of 4,876,882	41.0% of 34,472,293
% Children Below Poverty	NA	NA	17.6	8.3	6.6	NA	0.0	12.2	18.3	18.6
% 65+ Below Poverty	NA	NA	0.0	5.1	1.5	NA	0.0	5.5	8.4	9.8
% Families Below Poverty	NA	NA	7.4	3.2	3.6	NA	0.0	5.9	9.8	9.9
Female Headed HH with Children <18 (%)	NA	NA	9.6	6.4	3.9	NA	11.4	5.7	7.1	7.3

HH: Household
NA: Not Available
Source: American Community Survey 2005-2009, Claritas 2010

METHODOLOGY

Analytic Methods Used

The Needs Assessment 2011 was a collaborative effort by Sutter, SJHS-SC, Kaiser Permanente and the Sonoma County Department of Health Services to spotlight the health, well-being and future of the children of Sonoma County. Since 2001, these partners have joined forces in their needs assessments to address significant community health issues. This report continues to draw attention to children's health issues, focusing on four areas: dental health; maintaining a healthy weight through nutrition and physical activity; avoiding alcohol and drugs; and ensuring that babies are born drug free. This needs assessment takes a close look at progress toward improvements in health through initiatives, innovation and community collaboration and continues to search out "Windows of Opportunity" to prevent serious children's health problems and to bring the community together to envision and realize a "Lifetime of Health" for our children.

The Needs Assessment points to and acknowledges the good work of the many important efforts underway throughout the county to address child health: Health Action, the Community Activity and Nutrition-Coalition (CAN-C), First 5 Sonoma County, Healthy Eating, Active Living (HEAL), The Sonoma County Oral Health Access Coalition, The Pediatric Dental Initiative, and Drug Free Babies among others. These are spotlighted to provide an opportunity for those in the community who want to support this work to do so. It takes commitment from individuals and organizations, adding their resources and strength to these local efforts, to be successful in making critical shifts in children's health in our community.

Data used to support the findings that led to the priority health issues discussed in the needs assessment include local, regional, and national surveillance and epidemiological data in the areas of oral health, substance abuse and obesity and nutrition. Secondary level quantitative data include large-scale state, county and other regional level surveys, U.S. Census data, and other demographic data.

In addition the to being a partner in the development of the *2011-2014 Sonoma County CHNA*, St. Joseph Health, Petaluma Valley invests along with St. Joseph Health, Santa Rosa Memorial and other community partners in Healthy Sonoma County website:
http://www.healthysonoma.org/index.php?module=htmlpages&func=display&pid=101

See Appendix 4 for detailed CHNA data.

Prioritization Process and Criteria

Interviews were conducted with key informants, including: dental providers, other health care providers, Community Action Partnership and other community-based organizations, public agencies, First 5 Sonoma County, and others.

Secondary data was analyzed from local and statewide sources.

Community and provider feedback on the Needs Assessment results was obtained through the use of generative questions in the hospital's Community Benefit Committee and staff meetings, community focus groups, and semi-structured interviews. These interviews yielded the following:

- Most community members are not aware of the lack of fluoridated water in Sonoma County, and its impact on oral health.
- Many people do not have dental insurance and dental care is too expensive for them to pay for it out of pocket.
- Many people are not aware of the extent of the problem.

- Many people do not see oral health care as a priority compared to housing, food, and safety; until they or the children are in pain.
- Some people understand the importance of dental care, but encounter obstacles in accessing care consistently, especially preventive services.

Information Gaps

We believe that there was no information gap that impacted St. Joseph Health, Petaluma Valley's ability to reach reasonable conclusions regarding community health needs.

Collaborative Agencies

The Sonoma County Health Alliance (SCHA) was formed to improve the health of Sonoma County through collaboration among the many health systems and providers in the County. The Alliance formed a Community Health Improvement subcommittee to foster community health improvement through collaborative planning, investment and action, with participation from Sutter Medical Center of Santa Rosa, St. Joseph Health – Sonoma County (Santa Rosa Memorial & Petaluma Valley Hospitals), Kaiser Permanente Medical Center – Santa Rosa and the Sonoma County Department of Health Services.

<u>Community Health Improvement Committee, Sonoma County Alliance:</u>

The Community Health Improvement Committee is made up of:

Andrea Michelsen, Community Benefit/Community Health Manager Public Affairs, Marin and Sonoma Service Area, Kaiser Permanente

Jo Sandersfield, VP Mission Integration, St. Joseph Health, Sonoma County

Penny Vanderwolk, Fund Development and Community Relations Manager, Sutter Medical Center of Santa Rosa

Ellen Jones Bauer, Health Action Program Manager, Sonoma County Department of Health Services

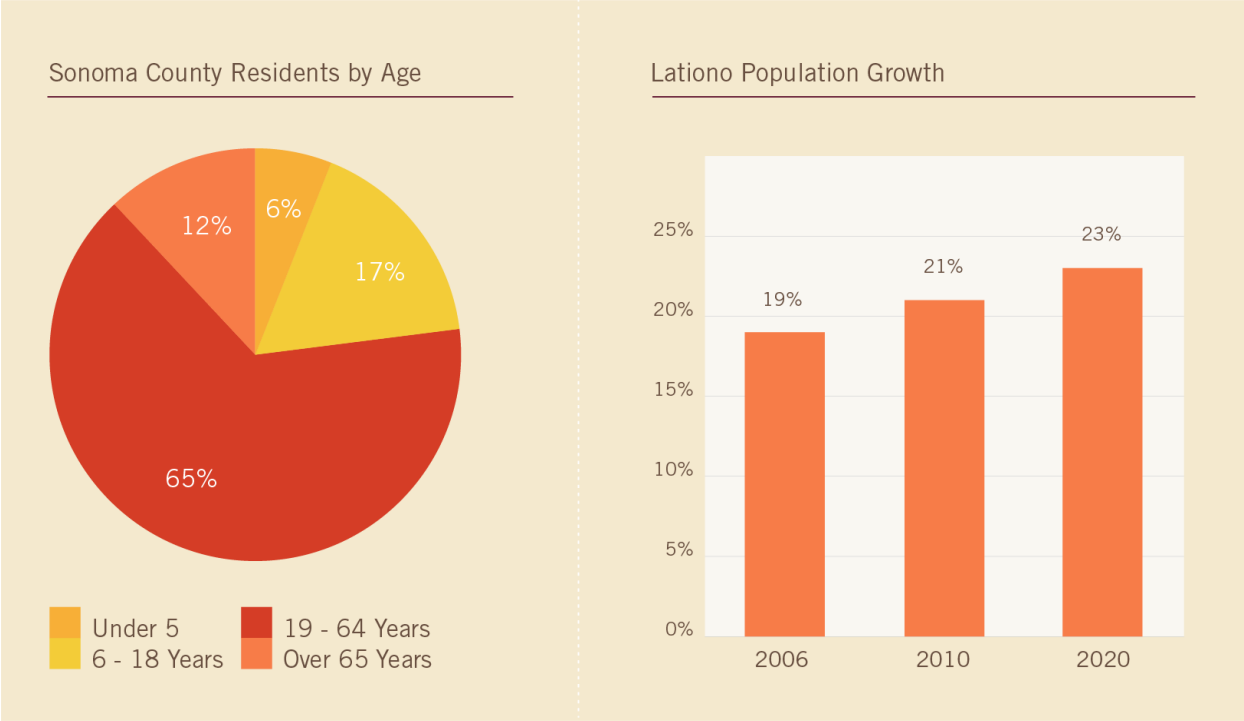
PRIMARY AND SECONDARY DATA

Demographic Overview
(excerpt from 2011-2014 Sonoma County CHNA, see Appendix 4)

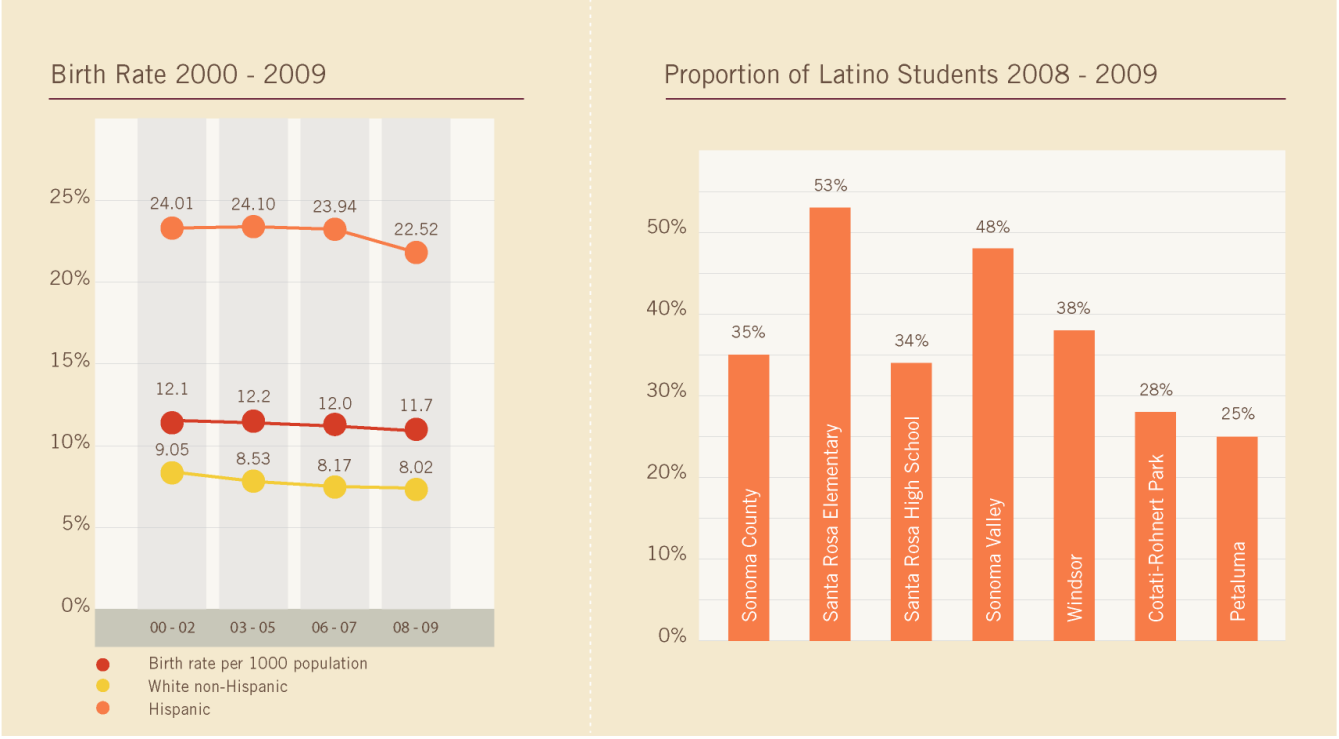
St. Joseph, Health, Petaluma Valley is just 35 miles north of San Francisco, amidst 1,576 square miles.

In 2009, Sonoma County had the 17th largest county population of the 58 counties in California, with 472,102 residents, of whom 117,928 were children ages 0 to 19.[i] Santa Rosa, the county seat and largest city, has one-third of the total population of Sonoma County and ranks as the 30th largest city in the state. A majority of Sonoma County residents (69%) live within the nine separate cities, with the remainder living within the unincorporated areas of the county. From 2000 to 2009, the average population increase was 3,113 residents per year.

Demographics. Almost one-quarter of Sonoma County's population is under 18 years old, 27% of whom are younger than school-age (0 to 5 years old). More than 12% is 65 years and older, and the remainder (65%) is between 19 and 64 years old.[ii] Although its racial/ethnic composition is changing, Sonoma County is still substantially less diverse than the state as a whole: 67.7% of Sonoma County residents are white (non-Hispanic); 23.6% are Latino, 4.3% are Asian/Pacific Islander, and 1.8% are African American.[iii] The biggest demographic shift is within the Latino population: this is the fastest growing ethnic group, already having surpassed the State's 21% projection for increase by 2010, and 23% by 2020.[iv] The total Latino population is now projected to increase 300% by 2050—from 80,742 in 2000 to 250,692 in 2050.[v] This increase means that the county's culture has changed over the last two decades and it is essential to take cultural and linguistic competency into account when designing effective activities and projects.



Sources: US Census, American Community Survey; California Department of Finance, County Population Estimates by Age and Sex.



Birthrates Source: California Dept of Public Health, Birth Statistical Master Files
Proportion of Latino Students Source: California Dept of Education

Birthrates. The overall Sonoma County birth rate did not change significantly from 2000 to 2009 (12.2 in 2003-05, 11.7/1,000 in 2008-09[vi]) although there were significant differences in birth rates among racial/ethnic groups. Hispanics had the highest birth rate of any racial/ethnic group in Sonoma County from a high of 24.1/1,000 in 2003-05 down to 22.5/1,000 in 2008-09), followed by Asian/Pacific Islanders. Together, they account for more than twice the birth rate of white, non-Hispanic women in the county, which has continued into 2007.[vii] In 2005 and 2008, 40% of births were to foreign-born mothers,[viii] with the majority of foreign-born mothers coming from Mexico (77%). With such a high rate of Latino births, programs for children's health need to be culturally and linguistically appropriate to this group of county residents to increase the opportunity to make a positive impact on children's health and prevent downstream expenses.

Children in school. During the 2008-2009 school year, 71,049 students enrolled in Sonoma County public schools. Throughout the 1990s, enrollment in Sonoma County public schools rose steadily, by about 2% annually on average. In 2001, the trend shifted downward and Sonoma County is firmly in an era of declining enrollment. Today, Sonoma County's local schools are educating the most ethnically and linguistically diverse youth population in the county's history. Latinos comprise 35% of the county's public school students, up from 15.5% in 1993-94.[ix] Latinos comprise 53% of elementary students in Santa Rosa schools and 34% of Santa Rosa high school students. They constitute 48% of Sonoma Valley's students, 38% of Windsor students, 28% of Cotati-Rohnert Park students and 25% of Petaluma students.[x] With this population shift has come greater language diversity. A decade ago, 2% of Sonoma County's students were English-language learners, compared to 23% today. It is also striking that almost two-thirds of the nearly 25,000 Latino students now in public schools are not proficient in English.[xi] These changing demographics present challenges, in terms of providing culturally and linguistically appropriate education and closing the achievement gap. In Sonoma County, 78% of white students graduated with their class, while only 56% of Latino students did so. Annual completion rates for all students in Sonoma County fell from 90% in 2002-03 to 81% in 2006-07, with Latino students losing more ground than white students.[xii]

Children living in poverty. At the time of the 2000 Census, 4.7% of families had incomes below the Federal Poverty Level (FPL). In 2006, the Census Bureau's American Community Survey estimated that the number of families with incomes below the FPL had risen to 6.8%. In 2001-02, 25% of Sonoma County students were eligible for the Free and Reduced Price Meal Program (FRPM), a common indicator of low-income. In 2006-07, 35% of all Sonoma County students were eligible for FRPM, and by 2008-09, the percent rose to 39%. Districts with extremely high eligibility rates include Bellevue Union (87%), Roseland (77%) in south Santa Rosa, Monte Rio in the Russian River (62%), Santa Rosa Elementary District (64%), Sonoma Valley Elementary (48%) and Wright Elementary (67%).[xiii,xiv] Sonoma County's poorest children live primarily in a small number of low-income neighborhoods clustered along the Highway 101 corridor and in the Sonoma Valley, with smaller numbers residing in the Russian River and North Coast areas. While the rate of poverty among Sonoma County families with school-age children is rising, it is still smaller than the statewide average, in which the proportion of children eligible for FRPM rose from 37% in 2001-02, to 51% in 2006-07 to 54% in 2008-09.

Table 1. Percent of Children Eligible for Free and Reduced Price Meal Program

Year	Sonoma County	California
2001–2002	25%	37%
2006–2007	35%	51%
2008–2009	39%	54%

Source: California Department of Education.

Employment and housing. Sonoma County's seasonally adjusted unemployment rate was 10.7% in the first quarter of 2010,[xv] up from 9.7% in 2009, which saw a huge jump from 5.7% in 2008.[xvi] County unemployment was above the national rate (9.7%), but remained below that of California (12.5%).[xvii] Sonoma County's median home price decreased $58,000, or 14%, on a year-over basis to $318,000 in 2009. This is the fourth consecutive year-over decline after nearly a decade of strong price advances.[xviii] Families making the median-family income for Sonoma County are not able to afford median-priced homes here. The median household income was $69,099 in Sonoma County in 2009, and the purchasing power for that level of income was a home price of $236,495.[xix] This is considerably less than the median-home price in Sonoma County.[xx]

Homelessness. The 2009 Homeless Census and Survey, required for application for federal funding for homeless services, estimated that Sonoma County is home to 7,883 people who have experienced homelessness within the previous 12 months, representing 1.7% of the county population. Of these, 13% were located in North County, 20% each in West and South County, and 47% in Central Santa Rosa. Nearly a quarter (24%) of survey respondents reported having children, and of those, 40% had children under the age of 18 living with them, or approximately 750 people have one or more children living with them in an unsheltered situation.[xxi]

Food insecurity. The USDA defines food insecurity as "access by all people at all times to enough nutritious food for an active, healthy life."[xxii] The USDA has concluded that food insecurity is a complex, multifaceted phenomenon that varies along a continuum of successive stages as it becomes more severe. The Redwood Empire Food Bank noted that it has seen a 20% increase in the number of people seeking emergency food assistance during each of the past two years.[xxiii]

Health insurance. Due to the success of the Children's Health Initiative (CHI), insurance coverage among children has increased dramatically in the last several years. Health care coverage for low-income children is provided through two publicly-funded health insurance programs—Medi-Cal and Healthy Families, and CHI through three privately-funded insurance programs: Kaiser Child Health Plan, Partnership HealthPlan of California and California Kids. Before CHI started, 12,169 children were

enrolled in Medi-Cal; as of December 2010, 27,005 are covered.[xxiv] Fewer than 3,000 children were enrolled in Healthy Families before CHI. As of September 2010, total enrollment is 11,968, nearly four times the previous enrollment.[xxv]

Community based health services. The community health centers of Sonoma County are members of the Redwood Community Health Coalition (RCHC), a four-county coalition dedicated to strengthening a community-wide system of primary care health services available to our diverse and multi-cultural populations. Sonoma County's nine community health centers operate twelve health care sites throughout the county, as well as two school-based health centers, two teen clinics, one free clinic, a mobile health van and services at the Graton Day Labor Center. These facilities and services provide the majority of health services to children and youth on Medi-Cal and Healthy Families and those who are uninsured. While these health centers provide extensive quality primary care, they identify specialty care, especially for children and youth, as a notable gap in the service continuum.

ORAL HEALTH

Interviews were conducted with key informants, including: dental providers, other health care providers, Community Action Partnership and other community-based organizations, public agencies, First 5 Sonoma County, and others.

Secondary data was analyzed from local and statewide sources.

Community and provider feedback on the Needs Assessment results was obtained through the use of generative questions in the hospital's Community Benefit Committee and staff meetings, community focus groups, and semi-structured interviews. These interviews yielded the following:

- The problem seems to be escalating. It isn't improving.
- Parents and teachers are especially concerned about underage and illegal substance abuse.
- Not all high school students seem to be concerned. Some think drinking's a problem, and others think it's a rite of passage.
- Kids who don't get help are more likely to get into trouble with the law or drop out of school.
- There are health issues associated with reckless behavior: addiction, accidents, violence, rape, liver and organ disease, and death.
- Can lead to homelessness.

The 2009 Sonoma County Smile Survey reports that nearly all the county's kindergartners and 60% of third graders already had tooth decay, 16% of them currently with untreated decay.. Over three quarters of the children seen by the SJHS Dental Clinic's Mommy & Me program assessed over a 3-year period in 2007 had experienced tooth decay. In 2007, over a third of the children assessed by SJHS-SC's Mighty Mouth program during a 3-year period had untreated tooth decay; and over 425 experienced serious dental problems in 2009; meaning that about 2,800 of the county's school children could be experiencing advanced dental disease.

A comparison of the prevalence of dental disease in children participating in the Free/Reduced Price Meal program with those not participating in that program found that 67% of the low-income children had experienced tooth decay and 21% had untreated decay, as compared to 31% of the children in higher-income schools with tooth decay and 9% with untreated decay. 7% of the low-income children urgent untreated dental needs, as compared to 1% of the other children.

Latino children, the county's fastest growing ethnic group, are suffering with higher rates of dental disease, treated and untreated, as well as urgent needs than any other demographic group in the county. A comparison of dental disease among Latino children and Non-Latino Caucasian children in the 2009 Sonoma County Smile Survey found that 65% of Latino children had experienced tooth decay, versus 32% of Caucasian children; and that 20% of the Latino children had untreated decay versus 11% of Caucasian children.

Despite progress being made in expanding dental insurance coverage to Sonoma County's children, the California Health Interview Survey still ranks the county 44th out of 58th in the state, the bottom third of all counties. Those children enrolled in public health insurance are experiencing additional barriers to dental care, as many local dentists will not accept patients with Denti-Cal due to the low reimbursement rates. The lack of available providers means that even insured children must sometimes wait months for a dental appointment in Sonoma County.

Sonoma County's children are not receiving sufficient preventive dental care. According to the 2007 California Interview Study, nearly 11% of the county's teens and children of 2 years and older had never been to the dentist. Nor are Sonoma County's children receiving enough protective dental sealants. Mighty Mouth's survey and the 2009 Sonoma Smiles Survey both show that only 17% of the children surveyed reported having sealants, as compared to 28% on a state level.

On an environmental level, Sonoma County is one of the few counties in the nation to not have fluoridated water, a proven public health intervention to prevent dental disease. Only 3% of the county's public water supply is fluoridated (in the City of Healdsburg), versus the 67% of the nation's population that has access to fluoridated water.

Dental disease has been shown to have both early and long-term effects on overall health status. Dental disease during pregnancy can slow fetal growth and lead to low birth weight in infants, and even increase infant mortality. Children who experience dental or gum pain often suffer from compromised physical development, due to poor nutrition. It can also affect speech patterns and negatively impact social development and self-esteem.

Untreated dental disease has been shown to negatively impact school success, due to lost days in class and the child's inability to focus on the lessons when in school, due to the pain. The loss of school days also negatively impacts the financial bottom line for the schools. Over half a million children in the state of California missed at least one day of school due to dental problems, which caused local school districts to lose nearly $30 million in revenue. Emergency hospitalizations due to urgent dental disease can cost an average of $5,000 in the Bay Area of California.

OBESITY

Interviews were conducted with key informants, including: the Sonoma County Department of Health Services, hospitals, community health centers, other health care providers; Health Action Sonoma County; the Community Activity & Nutrition Coalition; Network for a Healthy CA; Northern CA Center for Well-being; Redwood Empire Food Bank; Women, Infants & Children (WIC); and other community-based organizations, public agencies, and others.

Secondary data was analyzed from local and statewide sources.

Community and provider feedback on the Needs Assessment results was obtained through the use of generative questions in the hospital's Community Benefit Committee and staff meetings, community focus groups, and semi-structured interviews. These interviews yielded the following:

- There is too much junk food, and the cost of fresh fruits and vegetables is rising, hard for low-income families.
- Childhood obesity is more recognized as a bit problem, and there are many efforts to inform the public about it..
- Schools don't offer enough healthy food and have less PE and obesity is rising among our young people.
- Some parents feed their children junk food because it's low cost and they're pressed for time.
- There are many risks associated with childhood obesity, like diabetes and heart disease, and it leads to problems later in life.
- Childhood obesity affects self-image.

The highest rates of obesity occur among population groups with the highest poverty rates. Children ages 5-11 years from low-income homes are exhibiting increasing rates of overweight, while youth ages 12-19 from low income homes are showing an increase in obesity. In 2008, Sonoma County's Hispanic children and teens represent higher rates of overweight and obesity than their white non-Hispanic counterparts.

- 21% low-income Hispanic children (5-19) were overweight and 25% were obese, while 16% of Hispanic children under age 5 were overweight and 16% were obese in 2008.
- 18% white non-Hispanic children (5-19) were overweight and 17% were obese (a decrease of 3% since 2005) and 17% of white, non-Hispanic children under age 5 were overweight and 12% of white, non-Hispanic children under age 5 were obese in 2008.

Sonoma County youth are not consuming the five daily recommended servings of fruits and vegetables. The percentage of Sonoma County teens meeting this recommendation fell from 48% in 2003 to 31% in 2005.[xxvi] In 2007, 60.9% of children ages 2 and older reported eating five or more servings of fruits and vegetables per day, a significant increase from 50.8% of the same age group two years earlier.

In 2005-2006 and 2008-2009, only 35% of Sonoma County 7th graders met all six of the basic fitness standards. Only 32% of 2008-2009 5th graders met all six standards, while 42% of 9th graders met them. According to the 2008-2009 California Physical Fitness Report, 29.6% of 5th graders, 25.9% of Sonoma County 7th graders, and 26.7% of 9th graders failed the Aerobic Capacity Test. While having the lowest pass rate among the grades tested, the 7th graders experienced a substantial improvement from 2005-2006 when 30.9% failed.

Sonoma County ranks among the counties in California with the highest prevalence of anemia. In 2005 and 2008, the prevalence of iron deficiency among children under age 5 was 18%. In 2009, the rate had dropped to 16.5%. Among children 5 to 19, the rate was 13% in 2005, and climbed to 16.5% in 2008, and fell back to 13.4% in 2009, 28th highest rate in the State. In 2008, the rate was significantly higher for Hispanic children 5 to 19 (17%) than for white, non-Hispanic children of the same ages (11%).

Sonoma County has among the highest costs of living, predominantly in terms of housing, in the country: the December 2009 cost of living index for Sonoma County was 160.2, compared to the US average of 100, considered a very high cost. The cost of living was 60 percent higher in the county than the US average. Families that pay a higher percentage of their income for housing may not have the same healthy food options as people with higher incomes.

As obesity rates continue to skyrocket, even young children are experiencing type 2 diabetes, high blood pressure and other physical consequences, as well as emotional problems. The current generation may even be on track to have a shorter lifespan than their parents. As the prevalence of overweight and obesity continues to rise, the long-term health and economic consequences will be staggering. This increase represents a major public health concern with the potential for future health risks and growing burdens on the healthcare system. Many health conditions once thought applicable only to adults are now being seen in children and with more and more frequency. Children are also more vulnerable than adults to a unique set of obesity-related health problems because their bodies are growing and developing.

- Lack of physical activity and poor nutrition account for approximately 112,000 preventable deaths each year in the United States, making these risk factors second only to tobacco use as causes of preventable death.
- Unless trends change, one in three children born in the year 2000 will develop type 2 diabetes. One in two children of color born in 2000 will develop the disease.
- Excess body weight increases the risk of many health conditions, including: asthma, sleep apnea and respiratory problems, orthopedic conditions, and high blood pressure. Obese children are also more likely to have increased risk of heart disease. One study found that approximately 70% of obese children had high levels (greater than 90th percentile) of at least one key risk factor for heart disease, and approximately 30% had high levels of at least two risk factors.
- Children who are overweight may suffer from social stigma, discrimination, lowered self-esteem, and depression. They tend to participate in fewer activities, to withdraw from social situations, and to be less physically active than their normal-weight peers. One study found that they have a similar quality of life as children diagnosed with cancer.
- Injuries seem to occur more often in overweight individuals, likely due to decreased flexibility and lower bone density. Efforts to promote optimal body weight may not only reduce the risk of chronic diseases but also the risk of unintentional injury among overweight and obese individuals.
- Overweight students miss, on average, one day of school per month. Absenteeism among overweight students is twenty percent higher than that of their peers.
- Overweight adolescents have a 70% chance of becoming overweight or obese adults, putting them at greater risk for heart disease, stroke and diabetes later in life. This increases to 80% if at least one parent is overweight or obese.

ALCOHOL AND TOBACCO

Alcohol, tobacco and other drug (ATOD) use among Sonoma County teens is a major public health issue. For many years, Sonoma County teens have exhibited high rates of alcohol use and high-risk behaviors. The majority of Sonoma County high school students in the 2007-09 CHKS Survey (86% of 11th graders, up from 83% two years before), report that it is "very easy" or "fairly easy" to obtain alcohol. Private parties are one of the most frequently reported avenues for access to alcohol either provided directly by parents, older siblings, or older friends. Statistics from 2001 to 2006 also show that most disciplinary actions filed against stores, bars and restaurants in Sonoma County were related to either selling alcohol to minors, employing a minor or allowing minors on the premises.

Alcohol use among youth continues as a significant challenge in Sonoma County, though California Healthy Kids Survey (CHKS) data reports improvement between 2006 and 2009. In 2006, 33% of Sonoma County (SC) 9th graders and 50% of SC 11th graders reported using alcohol in the past 30 days, compared to 28% and 44% respectively in 2009. At the same time, Sonoma County's 7th graders have a slightly lower rate than their peers statewide, while 9th graders are very close to their peers and 11th graders continue to have a higher rate than their peers in the state as a whole (36%).

Sonoma County students of alternative schools show significantly higher rates of alcohol, other drug and tobacco use then peers in comprehensive schools. In 2007-09, 65% of alternative school students report drinking alcohol in the past 30 days, compared to 28% in 9th grade and 44% in 11th grade; 55% of alternative school students report smoking marijuana, compared to 16% in 9th grade and 25% in 11th grade; and 50% of alternative school students report using tobacco compared to 11% in 9th grade and 16% in 11th grade.

In Sonoma County in 2009, more youth reported they had smoked marijuana than tobacco in the past 30 days. Survey results also show that Sonoma County students are using tobacco at similar or higher rates than their peers throughout California. In 2006 and 2007-09, daily tobacco between the seventh and ninth grades almost tripled and rose again in 11th grade.

Methamphetamine is a serious problem for some Sonoma County youth. In 2005-06, 2% of Sonoma County 9th graders and 3% of 11th graders reported having used methamphetamine one or more times in the past thirty days, while in 2007-09, 3% of 9th graders and 3% of 11th graders reported using methamphetamines. Ten percent (10%) of students in alternative high schools (i.e., court and continuation schools) reported current use of methamphetamine in 2005-06 and 6% in 2007-09.

In 2008, 49% of traffic fatalities in Sonoma County were alcohol-related, while 13% of traffic injuries were alcohol-related. In 2007-09, 22% of Sonoma County 9th graders, 28% of 11th graders and 58% of alternative school students reported drinking and driving, or riding in a car driven by someone who had been drinking (this represents a decrease over the 2005-06 CHKS for 11th graders and alternative school students, but a 2% increase for 9th graders). Forty six percent (46%) of 7th graders reported being a passenger in a car driven by someone who had been drinking alcohol, an increase from 44% in 2005-06.

Prescription drug abuse has been identified as a growing problem in Sonoma County. The Sonoma County Prevention Partnership, a voluntary collaborative convened by the Sonoma County Department of Health Services, has identified the misuse or abuse of prescription drugs as an issue and has selected it for research to determine the extent of the problem in Sonoma County.

Sonoma County lacks sufficient AOD treatment programs for youth. The number of youth admitted to AOD treatment programs in Sonoma County over the past three years has decreased from 627 to 550, as state and local budgets shrink. The current system for AOD treatment in Sonoma County relies on two funding sources: the Minor Consent Drug Medi-Cal System, and the Adolescent Treatment Expansion Program, and funding is only secured through 2012.

Geriatric Care Management for Low-Income Seniors

Agency on Aging. Area Plan 2009 – 2012; http://www.socoaaa.org/pdf/AREA_PLAN_FINAL.pdf; and the Area Plan Update 2010 – 2011. http://www.socoaaa.org/pdf/Area_Update_2010-2011.pdf)

There are there are 95, 867 individuals age 60 and older, representing 19.4% of the total population of 495,412 in Sonoma County. This represents an increase over the past year. There is also an increase in Latino seniors, representing 8.4% of the senior population in 2010 compared to 8% of the senior population in 2008. The 2000 Census Data identified 17,171 individuals 65 and older living alone, representing 29.6% of that age group (58,726). The 2000 Census Data also indicated that 5.9% of the

age 60 and older population was at poverty level and 9.8% of individuals in that age group were at 125% of poverty level. Census data identified that 16.3% of the senior population live in rural areas. Of the seniors in rural areas, 19% live alone. Clearly, with the increase in population, these numbers have grown over the past five years.

Within the over 60 population, the fastest growing age group is 85 and older. It is expected that in California, from 2000 to 2040, this age group will double in size. In Sonoma County, from 2000 to 2040, the 85+ age group will increase by 214% from 8,580 to 26,973 older seniors. By 2050, that number will increase by almost 300% from the year 2000 to 34,227 when more than one in five Sonoma County seniors will be over the age of 84. Sixty-one percent of those older seniors will be female; 39% will be male. Given that this age group generally suffers from higher rates of chronic disease and functional limitations, it will be challenging to meet their many needs.

Latinos are the fastest growing ethnic group in Sonoma County due to a young population that has a low death rate and a stable birth rate. The numbers of Latino seniors are projected to increase by 233% from 1990 to 2010. The steady increase of Latino seniors will continue for several decades and by 2050, that number will have increased from 2,410 in 1990 to 48,524 in 2050, a substantial 1,913%. Older Latinos are more likely to be living in poverty than older white non-Latinos.

Issues facing Latino seniors include lack of health insurance and access to care. In addition to receiving inadequate care for health problems, uninsured and underinsured populations also lack preventive health services. Diabetes is a primary health issue for Latino seniors, and those age 65 and older are more than four times as likely to be hospitalized due to uncontrolled diabetes than
non-Latino seniors. While African Americans are more likely to die from diabetes compared to other groups countywide, Sonoma County Latinos and those who don't speak English well are more likely to be obese, a significant risk factor for diabetes.

Latinos can show symptoms of Alzheimer's up to seven years earlier than non- Latino whites. While researchers are unable to explain the reason, there are several factors believed to contribute to the onset of Alzheimer's, including fewer years of formal education (7.3 years for Latinos versus 11.3 years for whites), higher levels of blood pressure, and higher levels of diabetes.

Each year, St. Joseph Health– Sonoma County's House Calls program sees senior patients with multiple complex unmet health and socio-economic needs. During fiscal year 2011, 23% of the House Calls patients were diagnosed with hypertension, and 17% with diabetes. Nearly one third were over 80 years of age.

Sonoma County's geography includes many natural boundaries which present challenges for service delivery. Santa Rosa is the urban center and provides many health and social services. Geographic barriers to outlying areas do, however, create difficulty for some to access services. Due to limited transit options, transportation is a particular challenge for those in rural areas on limited budgets or who no longer drive. The 2005 Sonoma County needs assessment, "Living Longer, Living Well," found that transportation was the number one need of Sonoma County seniors. There is a need to Increase access to home and community-based services to seniors and adults with disabilities, with special focus on underserved populations (includes Latino, GLBT, low income, socially and geographically isolated)

While Sonoma County residents have a lower poverty rate overall than do residents statewide, the 2000 Census data indicated that there were 5.9% of Sonoma County seniors living at poverty level and 9.8% who were at 125% of the poverty level. Poverty rates vary by age, sex, race and ethnicity among older adults. Older women are two times more likely to live in poverty compared to their male counterparts.

Older Blacks and Latinos are far more likely to be living in poverty than older non-Latino seniors. Low-income adults (those living under 200% of the federal poverty line) have lower rates of accessing preventive care. Although they may have Medicare, copayments and transportation and other costs are often barriers to their seeing a health care provider.

The recent "Elder Economic Security Standard™ Index" was developed by the UCLA Center for Health Policy Research, calculating the cost of living in each county in California, based on a senior's living situation and health status. It is intended as an alternative to the official federal poverty index which is a uniform standard used across the country, designed in the 1960's, based on consumption patterns of the 1950's. The Elder Index establishes actual costs in each county of the basics (housing, food, health care, transportation, etc.) needed by seniors to live independently in the community. In 2007 the national Federal Poverty Level (FPL) for a single adult living alone was $10,210. Using the actual costs measured by the Elder Index, the average minimum income needed by a single older Californian who rented was $20,011.
Over forty-one percent of Sonoma County seniors living alone have incomes below the Elder "Living Longer, Living Well." Report prepared by Sonoma County Human Services Department, Sonoma County Area Agency on Aging, Adult & Aging Division, June 2005 (10) 7 Index; 14.3% of Sonoma County senior couples have incomes below the Elder Index.

While California Department of Finance data indicates an increase of 13.3% in the Sonoma County senior population from FY 2003-2004 to 2008-2009, funding to serve this population has not increased. In fact, from FY 2003-2004 to FY 2008- 2009 there was a cumulative budget reduction for services of 6% in baseline funding to the Area Agency on Aging. This has created an extremely fragile network of services for frail and vulnerable adults age 60 years and older. (This percentage is exclusive of the Health Insurance Counseling and Advocacy Services
[HICAP] funding which had significant funding increases as a result of the implementation of Medicare Part D and the increase in the eligible Medicare population.) During FY 2008-2009, the local Ombudsman program funding was reduced by 23% from the previous year.

The increase in the numbers of the over 60 population will impact the health care system. By 2030, more than six out of every 10 boomers nationwide will be managing at least one chronic condition. More than one out of every three will be obese, one out of every four will be living with diabetes, and one in two will be suffering from arthritis. One out of every eight people over 65 will suffer from Alzheimer's; almost one out of two over 85 have the disease. About a quarter million Americans under the age of 65 have "younger onset" Alzheimer's.

It is critical to invest resources towards helping seniors stay healthy and independent. Evidence-based health promotion/disease prevention activities can be very cost effective. Institutional care costs are very high. Home and community-based care is estimated to cost one quarter of the costs associated with institutional care. If disabilities can be averted or postponed and seniors can remain in the community, there are additional savings. Investing in home and community-based care is more cost-effective, in economic and human terms, than paying for expensive Medicare health care claims, Medicaid nursing home bills, or losing the economic and social contributions of older Americans. Home and community-based services also support the Olmstead Decision—a Supreme Court decision that "requires public agencies to provide services in the most integrated setting appropriate to the needs of qualified individuals with disabilities." It also supports boomers' desires to live in their own homes and remain active in their communities as long as possible.

Mental health issues are an important part of senior health care. The risk of depression in the elderly increases with other illnesses and when ability to function becomes limited. Because many older adults experience illness or functional limitations, health care professionals may mistakenly conclude that

depression is a normal consequence of these problems — an attitude often shared by patients themselves. Estimates of major depression in older people living in the community range from less than one percent to about five percent, but rises to 13.5 percent in those who require home healthcare and to 11.5 percent in elderly hospital patients.

COMMUNITY INPUT

Identity and Qualifications of Third Parties

The Sonoma County Health Alliance 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. The Alliance formed a Community Health Improvement subcommittee to foster community health improvement through collaborative planning, investment and action, with participation from Sutter Medical Center of Santa Rosa, St. Joseph Health– Sonoma County, Kaiser Permanente Medical Center – Santa Rosa and the Sonoma County Department of Health Services. Key experts in priority health areas were engaged and consulted on an ongoing basis and when the assessment was completed, invited to participate in discussions around further opportunities to collaborate on identified issues. Steering committee members interviewed and met with the groups and individuals who are listed in the Acknowledgements at the beginning of the Needs Assessment Report. A presentation was also made to the County Board of Supervisors, as well as Santa Rosa City Council members and the City Manager.

The Alliance's Community Health Improvement subcommittee, including the hospital, contract with BK Consulting Services for research and writing assistance in completing the needs assessment.

Identification of Community Organizations and Individuals

Names are not connected with the comments, as participants were asked to speak candidly and assured of confidentiality.

The hospital's Community Benefit team obtains feedback on the findings in the Needs Assessment from community representatives through interviews and focus groups prior to the document being finalized, however this process is not formalized among all the CHNA partners and is not currently documented, although it has been in past CHNAs.

As the partnership of hospitals and health department has focused on these efforts on behalf of children, at the same time, the county government and community groups have joined to develop and support organized initiatives and data collection. These efforts bring together a diverse group of stakeholders on a county and neighborhood level, to change how the community lives, encouraging collaboration among schools, businesses, public health providers, families, neighbors and the hospitals.

<u>Sonoma County Dept of Health Services:</u>
Mary Maddux-Gonzalez, MD, Health Officer and Public Health Division Director
Elizabeth Chicoine, Director of Public Health Nursing
Rebecca Jones Munger, Maternal Child Health Coordinator, Supervising PH Nurse
Chris Bekins, Health Information Specialist, Healthy Communities Section
Jenny Mercado, Epidemiologist
Cathleen Wolford, Mental Health AOD Services Division
Donna Newman-Fields, Alcohol and Other Drugs Prevention Coordinator
Jennie Tasheff, Executive Director, First Five Sonoma County

Health Care and Dental Care:
Viveka Rydell, CEO Pediatric Dental Initiative
Pedro Toledo, Redwood Community Health Coalition, Director of Community and Government Relations
Barbara Graves, Health Care Consultant

Schools:
Lynn Garric, Safe Schools Project Director, Sonoma County Office of Education

Social Services:
Maria I. Gil-Ibanez, Director of Health Programs, Community Action Partnership of Sonoma County
Michael Spielman, Executive Director, Drug Abuse Alternatives Center
Lynn Campanario, Outpatient Services Director, Drug Abuse Alternatives Center

Community Health Improvement Committee, Sonoma County Alliance:
Andrea Michelsen, Community Benefit/Community Health Manager Public Affairs Marin Sonoma Service Area Kaiser Permanente
Jo Sandersfield, VP Mission Integration, St. Joseph Health, Sonoma County
Penny Vanderwolk, Fund Development and Community Relations Manager, Sutter Medical Center of Santa Rosa
Ellen Jones Bauer, Health Action Program Manager, Sonoma County Department of Health Services

Individuals Providing Public Health Expertise

Mary Maddux-Gonzalez, MD, Health Officer and Public Health Division Director
Elizabeth Chicoine, Director of Public Health Nursing
Rebecca Jones Munger, Maternal Child Health Coordinator, Supervising PH Nurse
Chris Bekins, Health Information Specialist, Healthy Communities Section
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Jennie Tasheff, Executive Director, First Five Sonoma County
Ellen Jones Bauer, Health Action Program Manager, Sonoma County Department of Health Services

See Appendix 1 for brief description of the individual's special public health knowledge or expertise

Local Community Leaders Providing Input

Local leaders provided input to the Key Informant panels, Resident Focus Groups, and the development of the strategic plans. Because Key Informant Panels and Resident Focus Groups were held in confidentiality to ensure candid dialogue surrounding community needs, these names cannot be shared during this needs assessment.

Description of Existing Health Care Facilities and Other Resources Available

The Needs Assessment points to and acknowledges the good work of the many important efforts underway throughout the county to address child health: Health Action, the Community Activity and Nutrition-Coalition (CAN-C), First 5 Sonoma County, Healthy Eating, Active Living (HEAL), The Sonoma County Oral Health Access Coalition, The Pediatric Dental Initiative, and Drug Free Babies among others.

See Appendix 2 for additional listing

Appendix 1. Brief summary of qualifications

Mary Maddux-Gonzalez, MD, Health Officer and Public Health Division Director

> Mary Maddux-Gonzalez, a 22-year veteran of Sonoma County public health. Dr. Maddux-Gonzalez spent the past 11 and a half years as Sonoma County's public health officer and division director recently joined the Health Coalition to help community clinics and federally qualified health centers address the looming implementation of health care reform.

Elizabeth Chicoine, Director of Public Health Nursing, Maternal Child Adolescent Health, Department of Health Services, Sonoma County

Rebecca Jones Munger, R.N., C.N.M. Maternal Child Health Coordinator, Supervising PH Nurse, Maternal Child Adolescent Health, Department of Health Services, Sonoma County

> Rebecca Jones-Munger, R.N., C.N.M., is a graduate of McGill University School of Nursing and received her midwifery training at USC/LAC. She also serves as faculty for California DHS, Cancer Detection Section.

Chris Bekins, Health Information Specialist, Healthy Communities Section

Jenny Mercado, Epidemiologist, Department of Health Services, Sonoma County

Cathleen Wolford, Mental Health AOD Services Division

Donna Newman-Fields, Alcohol and Other Drugs Prevention Coordinator

Jennie Tasheff, Executive Director, First Five Sonoma County

Ellen Jones Bauer, Health Action Program Manager, Sonoma County Department of Health Services

Appendix 2: St. Joseph Health, Petaluma Valley Community Benefit Committee Roster

Name	Last Name	Organization
Sister Linda	Buck	Sisters of St. Joseph of Orange Santa Rosa Memorial Hospital Board of Trustees
Jim	Carr	Community Volunteer Petaluma Valley Hospital Board of Trustees
Pam	Chantar	Santa Rosa Memorial Hospital Board of Trustees
Oscar	Chavez	Community Action Partnership of Sonoma County
Teejay	Lowe	G & G Market Santa Rosa Memorial Hospital Board of Trustees
Ernesto	Olivares	Santa Rosa City Council Member
Todd	Salnas	SJH – Santa Rosa Memorial & Petaluma Valley
Sister Marian	Schubert	EVP, Mission Integration St. Joseph Health
Jo	Thornton	Petaluma Health Care District
Sharon	Wright	Wright Consulting Santa Rosa Memorial Hospital Board of Trustees

Appendix 3: Facilities that provide healthcare in Sonoma County

The following are other facilities providing health care in Sonoma County region. This list is not exhaustive.

Organization	Address	Description
Kaiser Hospital and Healthcare Network	401 Bicentennial Way Santa Rosa, CA 95403	Hospital, medical group, and health plan system serving the greater Santa Rosa area
Sutter Medical Center of Santa Rosa	3325 Chanate Rd. Santa Rosa, CA 95404	Community based, not-for-profit hospital serving Sonoma County and neighboring communities.
Petaluma Valley Hospital	400 North McDowell Blvd. Petaluma, CA 94954	80-bed acute and critical care hospital, owned by the Petaluma Health Care District; and operated by St. Joseph Health
Healdsburg District Hospital	1375 University Ave. Healdsburg, CA 95448	Non-profit district hospital serving the North County area, including Cloverdale, Geyserville, Healdsburg and Winsor
Palm Drive Hospital	501 Petaluma Ave. Sebastopol, CA 95472	Independent, non-profit facility operated by the Palm Drive Health Care District in West County. Licensed for 37 beds, five of which are intensive care beds and the remainder medical-surgical beds.
Sonoma Valley Hospital	347 Andrieux St. Sonoma, CA 95476	83-bed, full-service acute care district hospital serving the East County area, including the City of Sonoma and surrounding area
Alexander Valley Regional Medical Center	6 Tarman Dr. Cloverdale, CA	Non-FQHC community health center. Member Redwood Community Health Coalition
Alliance Medical Center	1381 University Ave. Healdsburg, CA 95448	FQHC community health center. Member Redwood Community Health Center
Alliance Medical Center	8465 Old Redwood Hwy, Ste 400 Windsor, CA	FQHC community health center. Member Redwood Community Health Center
Petaluma Health Center	11179 No. McDowell Blvd Petaluma, CA 95454	FQHC community health center. Member Redwood Community Health Center

Appendix 3 (continued)
Other Facilities that provide healthcare in Sonoma County (continued)

The following are other facilities providing health care in the Sonoma County region. This list is not exhaustive.

Jewish Community Free Clinic	490 City Center Dr. Rohnert Park, CA 94928	Non-FQHC community health center. Member Redwood Community Health Center
Santa Rosa Health Centers: Brookwood Health Center	983 Sonoma Ave. Santa Rosa, CA 95405	FQHC community health center. Member Redwood Community Health Center
Santa Rosa Health Centers: Elsie Allen Health Center	Elsie Allen High School 599 Bellevue Ave. Santa Rosa, CA 95407	FQHC community health center. Member Redwood Community Health Center
Santa Rosa Health Centers: Vista Family Health Center	3569 Round Barn Circle Santa Rosa, CA 95407	FQHC community health center. Member Redwood Community Health Center
Santa Rosa Health Centers: Southwest Community Health Center	751 Lombardi Ct., Ste B Santa Rosa, CA 95407	FQHC community health center. Member Redwood Community Health Center
Sonoma County Indian Health Project	144 Stony Point Rd Santa Rosa, CA 95407	FQHC community health center. Member Redwood Community Health Center
Roseland Pediatrics	711 Stony Point Rd, Ste 17 Santa Rosa, CA 95407	
Sonoma Valley Community Health Center	430 W. Napa St., Ste F Sonoma, CA 95407	FQHC community health center. Member Redwood Community Health Center
West Center Community Health Centers: Occidental Area Health Center	3802 Main St. Occidental, CA 95465	FQHC community health center. Member Redwood Community Health Center
West Center Community Health Centers: Russian River Health Center	16319 3rd St. Guerneville, CA 95446	FQHC community health center. Member Redwood Community Health Center
West Center Community Health Centers: Sebastopol Community Health Center	6800 Palm Ave., Ste C-2 Sebastopol, CA 95472	FQHC community health center. Member Redwood Community Health Center

Appendix 4: Sonoma County Community Health Needs Assessment 2011-2014

Sonoma County Community Health Needs Assessment 2011-2014

ACKNOWLEDGMENTS

Sonoma County Department of Health Services

Mary Maddux-Gonzalez, MD, Health Officer and Public Health Division Director

Elizabeth Chicoine, Director of Public Health Nursing

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Social Services

Maria I. Gil-Ibanez, Director of Health Programs, Community Action Partnership of Sonoma County

Michael Spielman, Executive Director, Drug Abuse Alternatives Center

Lynn Campanario, Outpatient Services Director, Drug Abuse Alternatives Center

Members of Community Health Improvement Committee, Sonoma County Alliance

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Executive Summary

What is the Community Health Needs Assessment 2011?

The Needs Assessment 2011 is a collaborative effort by Sutter Medical Center of Santa Rosa, St. Joseph Health System – Sonoma County (Santa Rosa Memorial Hospital and Petaluma Valley Hospital), Kaiser Permanente Medical Center – Santa Rosa and the Sonoma County Department of Health Services to spotlight the health, well-being and future of the children of Sonoma County. Since 2001, these partners have joined forces in their needs assessments to address significant community health issues. This report continues to draw attention to children's health issues, focusing on four areas: dental health; maintaining a healthy weight through nutrition and physical activity; avoiding alcohol and drugs; and ensuring that babies are born drug free. This needs assessment takes a close look at progress toward improvements in health through initiatives, innovation and community collaboration and continues to search out "Windows of Opportunity" to prevent serious children's health problems and to bring the community together to envision and realize a "Lifetime of Health" for our children.

The Needs Assessment points to and acknowledges the good work of the many important efforts underway throughout the county to address child health: Health Action, the Community Activity and Nutrition-Coalition (CAN-C), First 5 Sonoma County, Healthy Eating, Active Living (HEAL), The Sonoma County Oral Health Access Coalition, The Pediatric Dental Initiative, and Drug Free Babies among others. These are spotlighted to provide an opportunity for those in the community who want to support this work to do so. It takes commitment from individuals and organizations, adding their resources and strength to these local efforts, to be successful in making critical shifts in children's health in our community.

The Spectrum of Prevention, "a fundamental model in public health, acknowledges that a broad range of factors plays a role in health."[xxvii] Policies, legislation and organizational practices are all powerful influences in shaping an individual's and a community's attitudes and behaviors. Strengthening an individual's skills and knowledge must be combined with broader community factors to encourage lasting change. A variety of programs that focus on different levels—individual, interpersonal, organizational, community and policy—offer the best hope to make changes in the health and well-being of county residents. The hospitals and health department are uniquely positioned to participate in the Spectrum by bringing attention to children's health issues in the community through media and with policymakers, as well as through services.

Why Focus on Children's Health?

Children are the treasure and the responsibility of our entire community. Through providing health care services to children in Sonoma County and working with community efforts to address children's health issues, the hospitals have become active in addressing significant problems that appear to threaten the future of our community and our children. Evidence abounds that implementing prevention activities at the earliest possible time produces positive impacts for children and families and for society in general. Healthy people make for a healthy community, where resources can be spent on prevention rather than serious preventable illness, and every effort put into assuring good health in young children is repaid many times over in their success and their health in later life.

As the partnership of hospitals and health department has focused on these efforts on behalf of children, at the same time, the county government and community groups have joined to develop and support organized initiatives and data collection. These efforts bring together a diverse group of stakeholders on a county and neighborhood level, to change how the community lives, encouraging collaboration among schools, businesses, public health providers, families, neighbors and the hospitals.

Underlying Themes of the Needs Assessment

Promoting prevention. The health problems raised in the Needs Assessment are preventable—with concerted action on the part of partners and the community. The Needs Assessment reinforces the county's focus on social determinants of health (e.g., race and poverty, neighborhoods, community connections, resiliency, and parenting) and stresses upstream solutions to reduce downstream costs to the county and families. Change requires uniting public and private sectors behind the message that individual efforts must be supported by policy, advocacy and community. Nothing short of a team approach will meet the challenges these critical issues present. The Needs Assessment suggests actions that can be taken on each issue at multiple levels including policies, programs, organizational practices and strengthening individual knowledge and skills.

Fostering understanding. The Needs Assessment is a tool to enhance understanding among the public about the link between childhood dental disease, obesity, and teen and perinatal alcohol, tobacco and other drug (ATOD) use and the long-term health of children and teens. In the "Indicators" section, the Needs Assessment revisits the data indicators proposed in 2008, aligns them with the Healthy Sonoma.org indicators and offers new ones to gain a fuller picture of Sonoma County children and youth, which can be used to measure the community's progress in improving these child health issues.

Reducing health disparities. Across the nation and in California, communities of color and low-income families and individuals suffer disproportionately from lack of access to health care and myriad health problems. Children are no strangers to the "health disparities" linked to socio-economic status and race/ethnicity. Of the issues raised in this Needs Assessment, this disparity is most evident in the areas of oral health and overweight/obesity. The Needs Assessment tries, where possible, to highlight the health disparities and propose actions that can begin to alleviate them.

Leveraging opportunities. The Needs Assessment is a critical planning document for the hospitals, and a call to action for the community on children's health. The community is clearly moving forward, and much more is needed. Every individual and organization can find a place on ***The Spectrum of Prevention*** sections throughout this Needs Assessment and join the work to improve children's health in our community.

Summary of Key Findings

Children's Oral Health. Dental disease is completely preventable and yet the most recent local survey found that almost half of Sonoma County's kindergartners and about 60% of its third graders have already experienced tooth decay, and over 16% of them have untreated decay.[xxviii] For many children, poor oral health is a painful ongoing problem, increasing their chances of falling behind in school and social development, and suffering painful bouts of toothache and infection. Low-income children suffer the most tooth decay. With a focus on prevention and more access to care, all Sonoma County children can experience optimum oral health.

Key Findings - Children's Oral Health

- Tooth decay is rampant among Sonoma County children.
- Untreated decay is a serious problem for Sonoma County children, especially for low-income children and Hispanic children.
- Sonoma County is making progress in expanding dental coverage for children.
- Children's insurance programs in Sonoma County do not provide equivalent coverage.
- Children who depend on public health insurance experience major barriers to receiving dental care.
- Children are not receiving urgent care for serious conditions such as Early Childhood Caries.
- Children are not receiving needed preventive dental visits.
- Children are not receiving protective dental sealants in sufficient numbers.
- Sonoma County children do not have access to fluoridated drinking water.
- Education for parents and children is essential to good oral health.

Key Indicators to Track Progress - Children's Oral Health

- The percentage of kindergarten and 3rd graders with untreated tooth decay in primary or permanent teeth.
- The percentage of low-income children with emergent or urgent (Class II or III) dental needs.
- The percentage of children ages 2-18 with dental insurance.
- The percentage of children aged 2 years and older who have not seen a dentist in the previous 12 months.
- The percentage of children with dental sealants.
- The percentage of children with access to fluoridated public water.

Childhood Obesity, Nutrition and Fitness. Childhood overweight is an urgent health crisis with no easy solution. Preventing childhood overweight is a collective responsibility requiring individual, family, community, health care, business, and governmental commitments to focus on this critical health issue. Access to affordable and healthy foods, local and safe parks and play spaces, addressing sedentary behavior and promoting physical fitness, all make a difference.

Key Findings - Childhood Obesity, Nutrition and Fitness

- Low-income children in Sonoma County are at highest risk for overweight and obesity.
- Higher rates of overweight and obesity are reported among Hispanic children ages 5-19.
- Sonoma County youth are not consuming the five daily recommended servings of fruits and vegetables.
- Many students are not meeting basic fitness standards.
- Anemia is prevalent among low-income children.
- Food insecurity is linked to overweight in Sonoma County.

- Infrastructure, policy and housing contribute to overweight and obesity in Sonoma County.
- Schools must be part of the solution to solving overweight and obesity.

Key Indicators to Track Progress - Childhood Obesity, Nutrition and Fitness

- The percentage of mothers who breastfeed their babies for 6 months.
- The percentage of children in Sonoma County who eat five servings of fruits and vegetables daily.
- The percentage of students who participate ages 6-18 who consumed fast food at least one time in the past week.
- The percentage of students who participate in moderate or vigorous physical activity for at least 20 minutes, three or more days per week.
- Percentage of 7th graders that achieve the Healthy Fitness Zone for all 6 areas of the annual California Physical Fitness test.
- The proportion of adolescents and children who walked, biked, or skated to or from school in the past week.

Youth Alcohol, Tobacco and Other Drug Use. Alcohol, tobacco and other drug use among Sonoma County youth is a major public health concern. The dangers of such use are extensive, pervasive and lasting for teens and yet the social pressures for teens to drink and use drugs are enormous. Community factors such as permissive attitudes and behaviors, and access from commercial and social sources play a huge role in contributing to underage drinking and drug use.

Key Findings - Youth Alcohol, Tobacco and Other Drug Use.

- Community norms and availability affect alcohol use in Sonoma County.
- Alcohol is the leading drug used by Sonoma County youth.
- Sonoma County students of alternative schools show significantly higher rates of alcohol, other drug and tobacco use then peers in comprehensive schools.
- More young people reported using marijuana than tobacco in the past 30 days.
- Tobacco use increases with age.
- Methamphetamine is a serious problem for some Sonoma County youth.
- Sonoma County teens continue to have high rates of binge drinking.
- Motor vehicle crashes are the leading cause of death among teenagers. Alcohol use is a major contributor.
- Prescription drug abuse has been identified as a growing problem in Sonoma County.
- Sonoma County needs more AOD treatment programs for youth.

Key Indicators to Track Progress - Youth Alcohol, Tobacco and Other Drug Use

- The percentage of teens that have not used alcohol or drugs in the past 30 days.
- The percentage of adolescents (age 12-17) who engaged in binge drinking in the past 30 days.
- The percentage of adolescents who report that they ever drove after drinking alcohol (9th and 11th only)
- The percentage of adolescents who perceive great risk associated with alcohol use of five or more drinks per week.
- The percentage of adolescents who perceive great risk associated with marijuana use of 1-2 times per week.
- The percentage of students ages 12-17 who are not current smokers.

Perinatal Alcohol, Tobacco and Other Drug Use. Women want to do the best they can for their babies. But through lack of knowledge or because of dependence or abuse, many women expose the fetuses they carry to alcohol and other drugs. Pregnancy is a unique time when women, even habitual ATOD users, are open to making changes in their lives for the sake of their future children. Remarkable progress is being made in Sonoma County to reach ATOD using pregnant women and help them eliminate substance abuse and find treatment.

Key Findings - Perinatal Alcohol, Tobacco and Other Drug Use.

- Illicit drug use by pregnant women in Sonoma County is a major problem.
- Tobacco is the most frequently used substance by pregnant women.
- Alcohol is the second most frequently used substance by pregnant women in Sonoma County.
- Marijuana is the drug used most often, but for pregnant women in treatment, methamphetamine is the primary drug of abuse.
- AOD use is linked to child neglect and abuse.
- Community providers have reported an increase in neonatal withdrawal from prescription drugs.

Key Indicators to Track Progress - Perinatal Alcohol, Tobacco & Other Drug Use

- The percentage of pregnant women in Sonoma County screened by perinatal providers for alcohol, drug and tobacco use during current pregnancy.
- The percentage of women in Sonoma County who report alcohol, drug and tobacco use during current pregnancy at screening.
- The percentage of pregnant women in Sonoma County with positive screening who meet the criteria for admission to treatment and successfully complete a treatment plan or leave treatment early with satisfactory progress.
- The percentage of babies born in Sonoma County with positive toxicology for fetal AOD exposure.
- The number of publicly funded treatment beds and day treatment slots in Sonoma County available to pregnant women and their children.

Where Do We Go From Here?

The purpose of the Community Health Needs Assessment 2011-2013 is to provide a snapshot of the health and well-being of Sonoma County's children with particular emphasis on dental and physical health and choosing healthy lifestyles. The Healthy Sonoma.org website will monitor and track progress on these issues, provide information about promising practices and offer the means to take individual and community action to assist in this important focus.

Community Health Needs Assessment
Sonoma County 2011-2013

> ***"It is unreasonable to expect that people will change their behavior so easily when so many forces in the social, cultural, and physical environment conspire against change. If successful programs are to be developed to prevent disease and improve health, attention must be given not only to the behavior of individuals, but also to the environmental context within which people live."*** *Institute of Medicine*[xxix]

Windows of Opportunity, Commitment to a Lifetime of Health

The 2011 – 2013 Community Health Needs Assessment furthers the work begun in 2008 to focus a spotlight on Sonoma County's children and to attend to four critical issues that have a profound impact on their health and the health and well-being of our communities: dental health; maintaining a healthy weight through nutrition and physical activity; avoiding alcohol and drugs; and ensuring that babies are born drug free. The 2011 Community Health Needs Assessment's continued focus on children's health is based on science, public health and community values for caring for children and each other. New research further supports the attitude that what we do for our children in their first days and early years of life has significant impact on their development and long-term health and the overall health of our community. Healthy people make for a healthy community, where resources can be spent on prevention, rather than serious preventable illness.

For nearly a decade, Sonoma County's three major hospitals—Sutter Medical Center, St. Joseph Health System, and Kaiser Permanente Santa Rosa—have collaborated with the Sonoma County Health Department Division of Prevention and Planning to create triennial Community Health Needs Assessments. The assessments provide a guide for the hospitals' community benefit planning, as well as important information to county wide planning efforts to focus resources to strengthen the health of the community.

Simultaneously, in its 2007 Sonoma County Strategic Plan, the Board of Supervisors directed County departments to work together to analyze and recommend solutions to the high costs of criminal justice. An ad hoc committee of County department staff met and developed a comprehensive report, "Upstream Investments to Reduce Long-Range Demand for County Criminal Justice" (2010), that sought to understand the "antecedents to criminal behavior," and made recommendations based on careful data analysis. The health department has been instrumental in this process, based on its ongoing commitment to and familiarity with the concepts of prevention and the connections of social determinants to individual health factors.

The report highlights a theme well-known to public health, education and child welfare, that was a basis of the First 5 Initiative: that social determinants play a critical role in health, criminal behavior and family functioning. Social determinants include race and poverty, neighborhoods, community connections and resiliency, and parenting. As much as genetics matters, socioeconomic status, the amount of stress that comes from having little or no control over one's work, safety or environment, neighborhood opportunities, caring adults, peers and connection to communities also matter. To make healthy choices, people need supportive environments, access to comprehensive health information and services, and life skills that support healthy choices. If a key component of the County plan is to lower the "downstream" county costs of criminal justice, then programs that have an impact on social determinants can make a difference. How we raise our children matters.

Because of the importance of childhood health on both the individual and the community in years to come, the four areas in this report span from pregnancy through the age of 18. The community recognizes that change—individual and community—is hard, but possible, if everyone works together to provide the right tools, the right information, the right incentives, and the right environment. Changing habits takes more than will power; it takes a community coming together. Changing outcomes takes more than stating goals; it takes working to achieving them every day, over time.

Essential to Sonoma County's vitality is its commitment to creating and sustaining healthy communities that can foster lifelong health. Since the 2008 Community Health Needs Assessment, these shared concerns, combined with data about gaps, challenges and opportunities and the economic realities facing the community, have led to a surge in community projects that take on the causes of problems at their root and seek to prevent them or mitigate them as quickly as possible. The very diversity of projects and activities speaks to the creativity and innovation emerging throughout the county.

A Comprehensive Effort to Improve Community Health

The Spectrum of Prevention, "a fundamental model in public health, acknowledges that a broad range of factors plays a role in health."[xxx] Policies, legislation and organizational practices are all powerful influences in shaping attitudes and behaviors. Strengthening an individual's skills and knowledge must be combined with broader community factors to encourage lasting change. A variety of programs offer the best hope to make changes in the health and well-being of county residents.

The Spectrum of Prevention

Healthier Community

Evidence abounds that implementing prevention activities at the earliest possible time produces numerous positive impacts for children and families and for society in general. The ultimate result of effective prevention is a healthier community, with healthier families and healthier individuals.

The graphic above shows the positive impacts of successful prevention and intervention with pregnant women who use alcohol and other drugs. This same model can be extrapolated to almost any effective prevention program working upstream of a significant health or social institution, especially the four areas of focus for this Assessment. A variety of interventions have the power to effect change on individuals and the community as a whole in each area. Helping children and youth learn to make healthy choices has ripple effects throughout the community, and achieving that requires collaboration with both the children and youth themselves and with the community. For example, to ensure opportunities for maintaining healthy weight means that

affordable, healthy food is easily accessible, that safe recreation opportunities exist and that the message is reinforced throughout the community. Healthy choices are essential to help youth live drug free: peer influence, parental influence, and enforcement of liquor laws, community awareness and education.

The History of the Community Health Needs Assessment

State Senate Bill 697 requires 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. 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. Toward that end, SCHA formed its Community Health Improvement subcommittee made up of representatives of the three large hospitals, Sutter Medical Center, Saint Joseph's Health System and Kaiser Santa Rosa, as well as a representative from Sonoma County Health Department Division of Prevention and Planning Division.

Previous to the development of the SCHA, the hospitals and the health department had enjoyed a productive collaboration around community benefit planning and programming since 1996 under the auspices of the former Health Care Leadership Council. Over the last 14 years, this group has led a number of important community health improvement projects, including education in early childhood development, bicycle safety, annual countywide flu clinics, breastfeeding promotion, a flu vaccine task force strengthening community health centers, supporting workforce development efforts, and efforts to prevent dangerous falls by senior citizens. Much of this progress flowed directly from the Community Health Needs Assessments.

Community Health Needs Assessment 2001 was a broad-based overview of demographic, economic, health and environmental factors that affect both community and individual health. It analyzed the community's status on a wide range of issues, including the availability of childcare, access to health services, public safety, HIV/AIDS, unintentional injuries, food-borne illnesses and mortality due to specific diseases. This broad assessment painted a picture of health status in Sonoma County.

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. Over the course of the next several years, the subcommittee focused on establishing a robust, ethnically diverse workforce pipeline from within Sonoma County by reaching out to minority high school students and creating opportunities for careers for these students in healthcare. This work 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. In collaboration with the Area Agency on Aging, the committee decided to focus a large part of the 2005 Assessment on senior issues.

Community Health Needs Assessment 2005 analyzed a broad spectrum of community health issues, focusing in particular on the needs of a rapidly growing senior population. The findings of this report spurred the subcommittee to address a variety of senior needs, particularly prevention of unintentional injury due to falls. The Sonoma County Health Alliance established the Senior Safety Task Force. It implemented a senior fall prevention program called "Step Wise." The program offers free classes and workshops developed by the Home Safety Council to help seniors learn how to avoid falls, reduce the fear of falling, and improve safety and activity levels.

Seniors who complete the program state that they are 10 to 50% less concerned about falls interfering with normal social activities with family, friends, neighbors or groups.

Community Health Needs Assessment 2008 shifted the focus from our oldest community members to our youngest. The partners of the subcommittee believed that the health of children is a litmus test for the health of our community. The partners have long been concerned that a number of very serious children's health issues are not receiving the attention they need. Fundamental issues such as access to dental care, childhood overweight and physical fitness, support for healthy lifestyle choices and the impacts of substance abuse on child and teen development, are a common interest among the committee members and issues of great concern to the public. The partners believe that their research and collaboration on these issues will assist government, communities and other local efforts to create positive change for children's health.

Community Health Needs Assessment 2011 extends the focus on the same four critical issues facing children, highlighting the expanded activities and efforts begun since the last Assessment, with the founding of Health Action and its data-driven action agenda to improve the health of Sonoma County residents through individual, local and countywide efforts toward health. The report explores the effects of Health Care Reform and its impact on the service delivery system, people's access to prevention services and activities. The Assessment considers the social determinants that affect both health and criminal justice and how programs might address them. The report also recognizes the important collaboration of County departments to invest in upstream prevention and the role healthy choices make in preventing downstream costs to individuals and the community, including the focused efforts to design and implement a patient centered health home model.

Because data tracking is so vital in determining the success or progress of the goals of any health intervention, let alone the goals of Health Action and the work of the hospitals and health department, the Needs Assessment also identifies data resources and gaps and attempts to align the indicators tracked by the website Healthy Sonoma.org with the indicators in the Assessment. Healthy Sonoma.org tracks data on Health Action's indicators. At the same time, the community health centers are implementing electronic health records, a technology that will foster stronger data collection on the community and county levels. The report recognizes that, even with the wealth of data tracking on some health topics, data in other areas lack consistency over time or do not exist in some important areas, such as perinatal alcohol, tobacco and drug use, and, given the economic realities, some data sources are at risk of being eliminated.

Health Action. One of the newfound opportunities in Sonoma County rests in the Health Action initiative. Health Action is a partnership of community leaders, organizations and individuals committed to improving the health of all Sonoma County residents. In November 2008, Health Action created an Action Plan to identify priority health issues and to develop local approaches to improve the health of the community. Included among these priority areas are youth fitness, obesity and nutrition. The Action Plan has resulted in an impressive array of programs on the county, city, region and neighborhood levels to bring healthy food, exercise and activity and a sense that we are all in this together. The Sonoma County Board of Supervisors, in May 2009, accepted Health Actions recommendations for seven initial health improvement projects, described in depth below: iWALK, iGROW, Food System Alliance, Patient-Centered Medical Home Learning Collaborative, Healthy Students Initiative, Safe Routes to School, and a Worksite Wellness Initiative, most of which provide opportunities for health improvement in the area of youth obesity and fitness.

Healthy Sonoma. Launched in 2010, Healthy Sonoma.org is a web-based tracker of more than 100 indicators of health data for Sonoma County. The web site is a resource of non-biased data and information about community health in Sonoma County, and healthy communities in general. It is intended to help community members, policymakers and planners learn about issues, identify improvements, and collaborate for positive change. The site allows for comparison between local, state and national targets as well as reporting on best practices.

Health Care Reform. 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 and Medicaid will mean more people can afford to seek primary and preventive care. The new law's direct investment in health centers and in the primary care workforce, and other key policy changes will provide a necessary backbone of support for service delivery for the millions of new patients in thousands of communities nationwide. The Health Care Reform bill will expand 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 the previous Medi-Cal limits. It will also expand access to preventive care and upstream services to prevent major expenses later on. The bill also expands funding for community health centers, which will allow them to incorporate more patients into their practices. Finally, the bill has provisions for oral health, requiring access to coverage through state Exchanges, with no charges for preventive care.

Patient Centered Medical Home (PCMH). Sonoma County's community health centers, working in concert with Redwood Community Health Coalition (RCHC), are developing the patient centered medical home. The PCMH is an approach to organizing the delivery of health care around the needs of the patient. Redesigning care through new models such as patient centered medical homes will provide greater access to health care providers, coordination of care and empowerment of the individual in their ability to make health decisions.

Data Collection

Local organizations place a strong value on data and data-driven priorities and strategies and many collect their own data for program development. And yet no standardized data sets have been determined for tracking the health status in key areas.

Healthy Sonoma.org tracks a number of data sets from outside organizations, such as the California Health Interview Study (CHIS), California Department of Education, Women, Infant and Children Program (WIC), and the Pediatric Nutrition Survey. Redwood Community Health Coalition of the community health centers has a long standing Quality Improvement Committee that tracks and shares data for local community health centers. Many of the health centers use local and state data on current health priorities to focus their quality assurance goals. All of the community health centers are moving to electronic health records, which will make the collection of consistent data easier. Each of the three hospitals is part of greater Bay Area systems that use research to support quality improvement. Finally, the Community Activity and Nutrition Coalition (CAN-C) has been collecting childhood obesity data for over ten years and uses it to set, implement, and monitor prevention strategies.

At the same time, gaps and inconsistency exists in available data to identify community needs, such as mental health, dental and chronic disease prevention. For maternal, child and adolescent health, only a few indicators, such as breastfeeding initiation and body mass index (BMI), are collected consistently. CHIS do not ask the same questions consistently from year to year, and its

data are slow in coming (the 2009 survey data are not expected until 2011). Further complicating the matter, the data in Kaiser's system are separate from the rest of community.

How to Use This Report

This report is divided into four sections: Children's Oral Health; Childhood Obesity, Nutrition and Fitness; Youth Alcohol, Tobacco and Other Drug Use; and Perinatal Alcohol, Tobacco and Other Drug Use. Each section provides specific information and data about the story behind the issue, the indicators being tracked within each area, and accomplishments and progress. Each section also references resources working within each level of ***The Spectrum of Prevention***, and these are later listed in Appendix III including links to web sites when available. In most instances, the indicators tracked here are aligned with the ones tracked by Healthy Sonoma.org.

While the Needs Assessment cites important improvements in many areas, much more remains to be done. Some community efforts such as Health Action are in early stages of their proposed projects to improve health, and the benefits could not be reaped or recorded yet. The hope is that by the time of the next Community Needs Assessment, both the tracking and the results will show significant progress, based on a thorough understanding of the social determinants that impact each of these areas of health, a commitment to make early intervention investments, and an involved community that is working on both systemic and individual change.

How the hospitals will use the Assessment. Each hospital will use the data and suggestions for action in developing its own community benefit plan for the next three years. In addition, the Assessment findings will drive the work of the hospitals on collaborative projects.

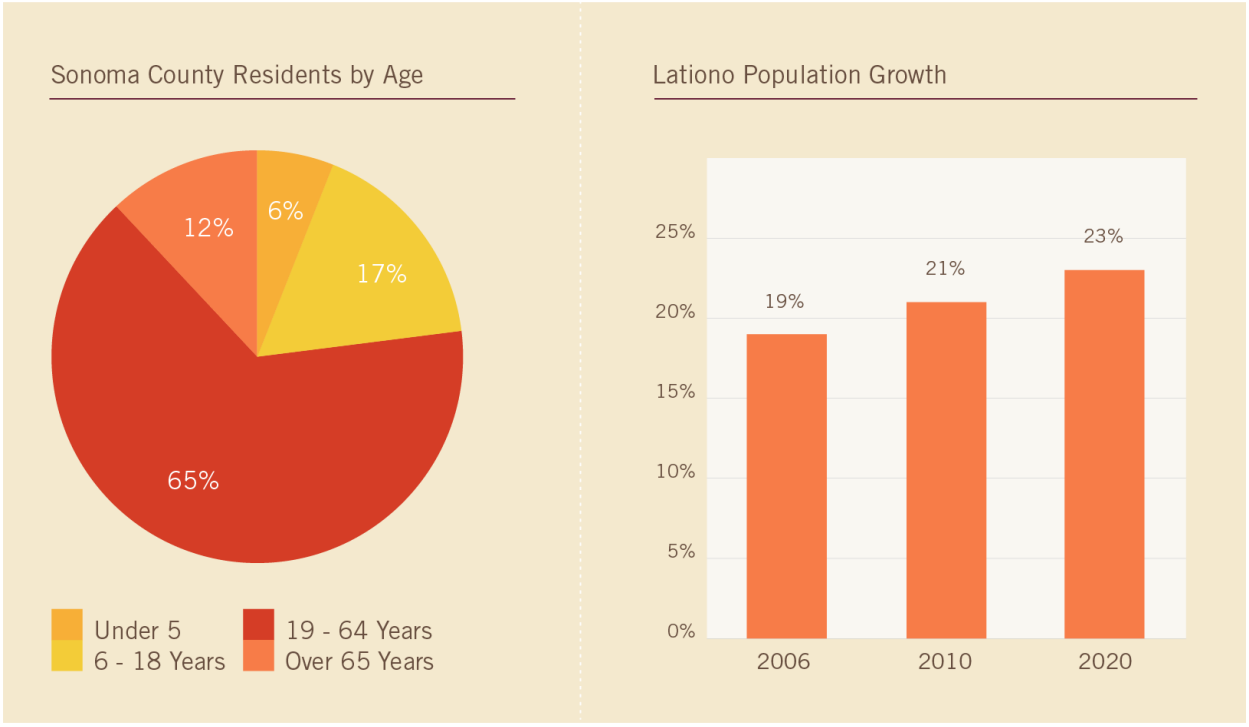
How the community will use the Assessment. Every individual and organization in our community can contribute to progress on addressing critical child health issues. The Assessment points out some of the numerous efforts already underway to address child health: the Community Activity and Nutrition-Coalition, First 5 Sonoma County, Children's Health Initiative, the Pediatric Dental Initiative, the State Incentive Grant Program to reduce teen drinking, the Breastfeeding Coalition, Drug Free Babies and many others. The Assessment highlights these so that individuals and organizations concerned about children's health may be informed, be engaged and support these efforts. It will take a strong commitment from everyone if Sonoma County is to be successful in making critical shifts in children's health in the community. Every individual and organization has a role to play. Each can look at ***The Spectrum of Prevention*** sections throughout this Needs Assessment and find a way to join in the work of improving children's health in the community.

Sonoma County Geography, Demographic and Health Status Information

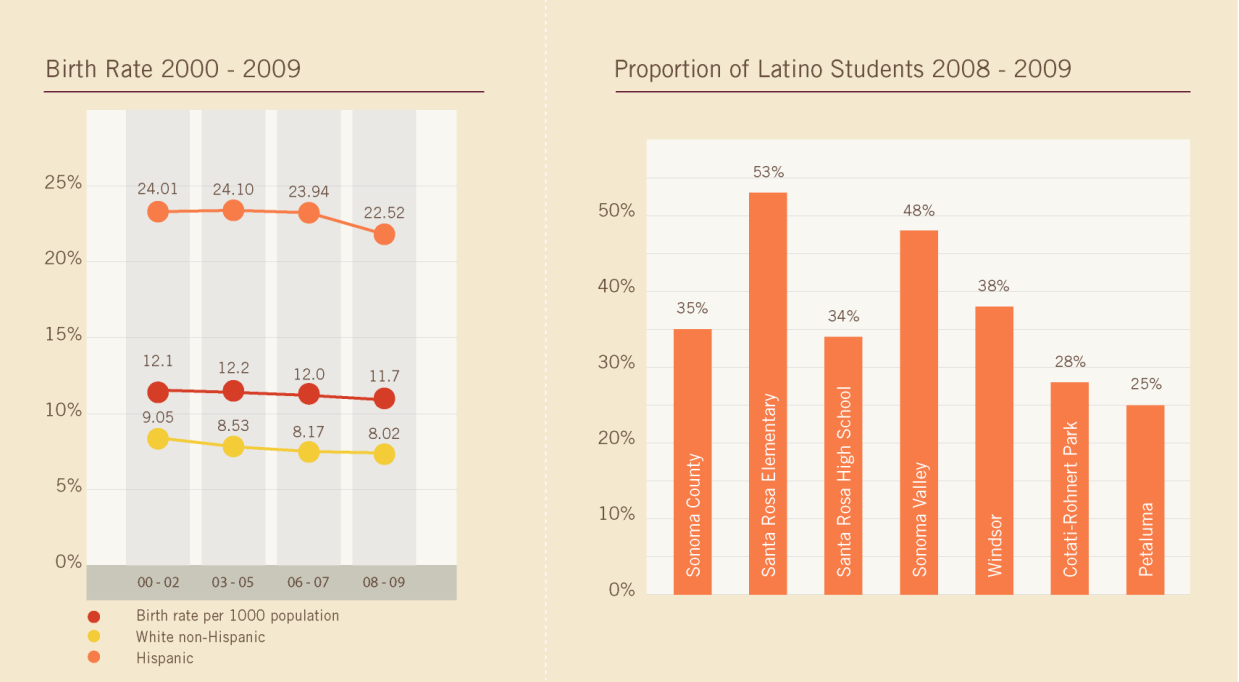
Just 35 miles north of San Francisco, amidst 1,576 square miles, one finds the Pacific Coast, the Russian River, vineyards, majestic old growth redwoods, historic town inns and fine hotels. Open space and agricultural land, much of it dedicated to wine production, account for a great majority of Sonoma County acreage.

In 2009, Sonoma County had the 17th largest county population of the 58 counties in California, with 472,102 residents, of whom 117,928 were children ages 0 to 19.[xxxi] Santa Rosa, the county seat and largest city, has one-third of the total population of Sonoma County and ranks as the 30th largest city in the state. A majority of Sonoma County residents (69%) live within the nine separate cities, with the remainder living within the unincorporated areas of the county. From 2000 to 2009, the average population increase was 3,113 residents per year.

Demographics. Almost one-quarter of Sonoma County's population is under 18 years old, 27% of whom are younger than school-age (0 to 5 years old). More than 12% is 65 years and older, and the remainder (65%) is between 19 and 64 years old.[xxxii] Although its racial/ethnic composition is changing, Sonoma County is still substantially less diverse than the state as a whole: 67.7% of Sonoma County residents are white (non Hispanic); 23.6% are Latino, 4.3% are Asian/Pacific Islander, and 1.8% are African American.[xxxiii] The biggest demographic shift is within the Latino population: this is the fastest growing ethnic group, already having surpassed the State's 21% projection for increase by 2010, and 23% by 2020.[xxxiv] The total Latino population is now projected to increase 300% by 2050—from 80,742 in 2000 to 250,692 in 2050.[xxxv] This increase means that the county's culture has changed over the last two decades and it is essential to take cultural and linguistic competency into account when designing effective activities and projects.



Sources: US Census, American Community Survey; California Department of Finance, County Population Estimates by Age and Sex.



Birthrates Source: California Dept of Public Health, Birth Statistical Master Files
Proportion of Latino Students Source: California Dept of Education

Birthrates. The overall Sonoma County birth rate did not change significantly from 2000 to 2009 (12.2 in 2003-05, 11.7/1,000 in 2008-09[xxxvi]) although there were significant differences in birth rates among racial/ethnic groups. Hispanics had the highest birth rate of any racial/ethnic group in Sonoma County from a high of 24.1/1,000 in 2003-05 down to 22.5/1,000 in 2008-09), followed by Asian/Pacific Islanders. Together, they account for more than twice the birth rate of white, non-Hispanic women in the county, which has continued into 2007.[xxxvii] In 2005 and 2008, 40% of births were to foreign-born mothers,[xxxviii] with the majority of foreign-born mothers coming from Mexico (77%). With such a high rate of Latino births, programs for children's health need to be culturally and linguistically appropriate to this group of county residents to increase the opportunity to make a positive impact on children's health and prevent downstream expenses.

Children in school. During the 2008-2009 school year, 71,049 students enrolled in Sonoma County public schools. Throughout the 1990s, enrollment in Sonoma County public schools rose steadily, by about 2% annually on average. In 2001, the trend shifted downward and Sonoma County is firmly in an era of declining enrollment. Today, Sonoma County's local schools are educating the most ethnically and linguistically diverse youth population in the county's history. Latinos comprise 35% of the county's public school students, up from 15.5% in 1993-94.[xxxix] Latinos comprise 53% of elementary students in Santa Rosa schools and 34% of Santa Rosa high school students. They constitute 48% of Sonoma Valley's students, 38% of Windsor students, 28% of Cotati-Rohnert Park students and 25% of Petaluma students.[xl] With this population shift has come greater language diversity. A decade ago, 2% of Sonoma County's students were English-language learners, compared to 23% today. It is also striking that almost two-thirds of the nearly 25,000 Latino students now in public schools are not proficient in English.[xli] These changing demographics present challenges, in terms of providing culturally and linguistically appropriate education and closing the achievement gap. In Sonoma County, 78% of white students graduated with their class, while only 56% of Latino students did so. Annual completion rates for all students in Sonoma County fell from 90% in 2002-03 to 81% in 2006-07, with Latino students losing more ground than white students.[xlii]

Children living in poverty. At the time of the 2000 Census, 4.7% of families had incomes below the Federal Poverty Level (FPL). In 2006, the Census Bureau's American Community Survey estimated that the number of families with incomes below the FPL had risen to 6.8%. In 2001-02, 25% of Sonoma County students were eligible for the Free and Reduced Price Meal Program (FRPM), a common indicator of low-income. In 2006-07, 35% of all Sonoma County students were eligible for FRPM, and by 2008-09, the percent rose to 39%. Districts with extremely high eligibility rates include Bellevue Union (87%), Roseland (77%) in south Santa Rosa, Monte Rio in the Russian River (62%), Santa Rosa Elementary District (64%), Sonoma Valley Elementary (48%) and Wright Elementary (67%).[xliii,xliv] Sonoma County's poorest children live primarily in a small number of low-income neighborhoods clustered along the Highway 101 corridor and in the Sonoma Valley, with smaller numbers residing in the Russian River and North Coast areas. While the rate of poverty among Sonoma County families with school-age children is rising, it is still smaller than the statewide average, in which the proportion of children eligible for FRPM rose from 37% in 2001-02, to 51% in 2006-07 to 54% in 2008-09.

Table 1. Percent of Children Eligible for Free and Reduced Price Meal Program

Year	Sonoma County	California
2001–2002	25%	37%
2006–2007	35%	51%
2008–2009	39%	54%

Source: California Department of Education.

Employment and housing. Sonoma County's seasonally adjusted unemployment rate was 10.7% in the first quarter of 2010,[xlv] up from 9.7% in 2009, which saw a huge jump from 5.7% in 2008.[xlvi] County unemployment was above the national rate (9.7%), but remained below that of California (12.5%).[xlvii] Sonoma County's median home price decreased $58,000, or 14%, on a year-over basis to $318,000 in 2009. This is the fourth consecutive year-over decline after nearly a decade of strong price advances.[xlviii] Families making the median-family income for Sonoma County are not able to afford median-priced homes here. The median household income was $69,099 in Sonoma County in 2009, and the purchasing power for that level of income was a home price of $236,495.[xlix] This is considerably less than the median-home price in Sonoma County.[l]

Homelessness. The 2009 Homeless Census and Survey, required for application for federal funding for homeless services, estimated that Sonoma County is home to 7,883 people who have experienced homelessness within the previous 12 months, representing 1.7% of the county population. Of these, 13% were located in North County, 20% each in West and South County, and 47% in Central Santa Rosa. Nearly a quarter (24%) of survey respondents reported having children, and of those, 40% had children under the age of 18 living with them, or approximately 750 people have one or more children living with them in an unsheltered situation.[li]

Food insecurity. The USDA defines food insecurity as "access by all people at all times to enough nutritious food for an active, healthy life."[lii] The USDA has concluded that food insecurity is a complex, multifaceted phenomenon that varies along a continuum of successive stages as it becomes more severe. The Redwood Empire Food Bank noted that it has seen a 20% increase in the number of people seeking emergency food assistance during each of the past two years.[liii]

Health insurance. Due to the success of the Children's Health Initiative (CHI), insurance coverage among children has increased dramatically in the last several years. Health care coverage for low-income children is provided through two publicly-funded health insurance programs—Medi-Cal and Healthy Families, and CHI through three privately-funded insurance programs: Kaiser Child Health Plan, Partnership HealthPlan of California and California Kids. Before CHI started, 12,169 children were enrolled in Medi-Cal; as of December 2010, 27,005 are covered.[liv] Fewer than 3,000 children were enrolled in Healthy Families before CHI. As of September 2010, total enrollment is 11,968, nearly four times the previous enrollment.[lv]

Community based health services. The community health centers of Sonoma County are members of the Redwood Community Health Coalition (RCHC), a four-county coalition dedicated to strengthening a community-wide system of primary care health services available to our diverse and multi-cultural populations. Sonoma County's nine community health centers operate twelve health care sites throughout the county, as well as two school-based health centers, two teen clinics, one free clinic, a mobile health van and services at the Graton Day Labor Center. These facilities and services provide the majority of health services to children and youth on Medi-Cal and Healthy Families and those who are uninsured. While these health centers provide extensive quality primary care, they identify specialty care, especially for children and youth, as a notable gap in the service continuum.

Children's Oral Health

> ***"Ignoring oral health problems can lead to needless pain and suffering, complications that can devastate well-being, and financial and social costs that significantly diminish quality of life and burden American society. Together we can affect the changes we need to maintain and improve oral health for all Americans and remove known barriers that stand between people and oral health services. -*** Donna E. Shalala, former Secretary of Health and Human Services

A mouth free of cavities, gum disease and injury is critical to children's healthy development and key to their success in school and in life. If cavities are not treated, children can develop infections severe enough to require emergency room treatment and their adult teeth may be permanently damaged. Sadly many children in Sonoma County are not reaping the benefits of good oral health, and their future overall health and success will be compromised. And yet, this disease—the most prevalent of all childhood diseases—is entirely preventable. Good oral hygiene, early and regular visits to the dentist, dental sealants and varnishes, proper nutrition and access to adequate levels of fluoride in the water supply can help children to achieve good oral health.

In order to see improvement in children's oral health in Sonoma County, three critical challenges must be addressed.

- **Capacity:** The American Academy of Pediatric Dentistry recommends that, by 12 months of age, every child be seen by a dentist, have a dental home and receive regular preventive checkups.[lvi] Parents in Sonoma County ranked "access to dental care" as their third highest priority of need of children in 2007. [lvii] Sonoma County does not have the infrastructure, the health professionals and the dental chairs to serve all low-income children. While the county has many dentists, pediatric dentists are in short supply.
- **Coverage:** Pediatric dentists who will accept Denti-Cal are rare. The reimbursement rate does not pay for the expense. Denti-Cal caps expenditures for children at $1,000. Some children are underinsured, requiring expensive copayments that parents cannot afford.
- **Education:** Consistently, providers have observed that many parents do not have a basic understanding of how to keep their children's mouths healthy. Because the issue is complex

and the information has changed since parents themselves were children, education that reaches parents, even as part of prenatal education, is essential to ensure their children's oral health is maximized through daily efforts.

Sonoma County's health professionals are taking steps to make oral health a core component of total child health care. Partnerships and linkages to primary care coupled with good hygiene practices and nutrition are key to improving the oral health of children in Sonoma County.

Children's Oral Health Defined

According to the Surgeon General's Report *Oral Health in America,*[lviii] oral health is more than healthy teeth. Oral diseases and disorders in and of themselves affect health and well-being throughout life. Lifestyle behaviors that affect general health such as poor dietary choices, affect oral health as well. Taking good care of the mouth's structures can prevent disease in the mouth and disease throughout the body.

Oral health involves the structures of the mouth, which include the teeth, gums, palate, tongue, inside of the cheeks, bones and supporting tissues. These structures help children to smile, speak, sigh, taste, chew, swallow, kiss, smell and cry. With these structures, children are able to show their feelings and interact with the world through facial expressions. Children with cavities eat poorly, stop smiling, are distracted from learning and miss school.

Dental disease. Tooth decay or "caries," is the most common form of oral disease. This disease process starts with bacteria in the mouth, which metabolize the carbohydrates children eat. The resulting acids eat away at the tooth's surface, eventually creating caries. Dental disease can be passed from one person to another, for example a mother to a child, through the spread of a bacterium (Streptococcus Mutans). Dental disease can become so severe and infection so rampant that the infection can spread to other parts of the body and, in rare cases, cause death.

Early Childhood Caries (ECC). ECC, also known as Baby Bottle Tooth Decay, is defined as tooth decay in the primary teeth of children less than six years of age. This disease forms a "distinctive pattern of severe tooth decay." Five to ten percent of preschool aged children in Sonoma County suffer from ECC.[lix] These children need aggressive intervention to treat the infection and restore the teeth to a functioning state. Very often, the treatment for ECC is extensive and requires sedation, often in a hospital or surgery center setting.

The Story Behind the Problem

> ***"A conceptual shift is needed away from this biomedical/behavioral 'downstream' approach, to one addressing the 'upstream' underlying social determinants of population oral health. Failure to change our preventive approach is a dereliction of ethical and scientific integrity."*** **-** RG Watt[lx]

According to the Surgeon General, "tooth decay is the single most common chronic childhood condition—5 times more common than asthma and 7 times more common than "hay fever" and even more common than obesity. The Dental Health Foundation, in its California Smile Survey 2006, called tooth decay "the number one health problem for California's kids." Twenty-eight percent (28%) of school children in California have untreated decay and by 3rd grade, over 70% of children have a history of tooth decay.[lxi] Roughly 25% of California children have not been to a dentist in the last year[lxii] and 17% of California kindergarteners have never been to a dentist.[lxiii] These problems are worse for low-income children in California, one third of whom have untreated decay.[lxiv]

> ***"Poor children and children of color are much more likely to have tooth decay and suffer the consequences of untreated disease."*** The California Smile Survey, 2006

Contributing Factors

Poverty. While children from across the socioeconomic spectrum experience tooth decay, higher rates of dental disease are found in low-income and minority children. Studies find a striking correlation between tooth decay and poverty. Poor children suffer many more dental caries than

their more affluent peers, and their disease is more likely to be untreated. Poor children have nearly "12 times more restricted activity days because of dental-related illness than children from higher-income families."[lxv] One reason for the disparity is that low-income families have difficulty paying for dental care.

Ethnicity. In California, Hispanic children are three times more likely to be poor than white children[lxvi] and children living in poverty are more likely to suffer from poor oral health.[lxvii] A new study by the UCLA Center for Health Policy Research published in *Health Affairs* in 2010 shows that regardless of income, Hispanic and African American children are less likely to have seen a dentist. The study cited several barriers: the small number of participating dentists within Medi-Cal, and racial or ethnic differences between dentists and patients within the population (there are disproportionately fewer Hispanic dentists (11%) in California).[lxviii]

Dental insurance. Good dental insurance correlates strongly with children receiving preventive dental care and achieving long-term oral health. Staying on track with regular preventive dental visits is much more likely if a child has good dental insurance. In California, only 21% of privately insured children had unmet dental needs but nearly 40% of uninsured children had unmet dental needs.[lxix] Many families struggle to pay for dental insurance for their children.

Parental knowledge and practices. Possibly the most important factor in determining a child's oral health is their parent's knowledge about good oral health, dental hygiene, nutrition and how to access dental care. Many parents do not understand the strong connection between oral health and overall health. Parents, especially recent immigrants, may never have learned how important it is to begin taking care of children's teeth early. Unfortunately, many children are put to bed with sugary liquids in a bottle—which causes ECC—and many children are not taught how to brush and floss teeth. Families, even those with dental insurance, may not understand the necessity for early and regular dental checkups or how to use dental insurance to access care.

The Consequences of Poor Oral Health

> ***"The mouth reflects general health and well-being."*** **-** Former Surgeon General David Hatcher, 2001

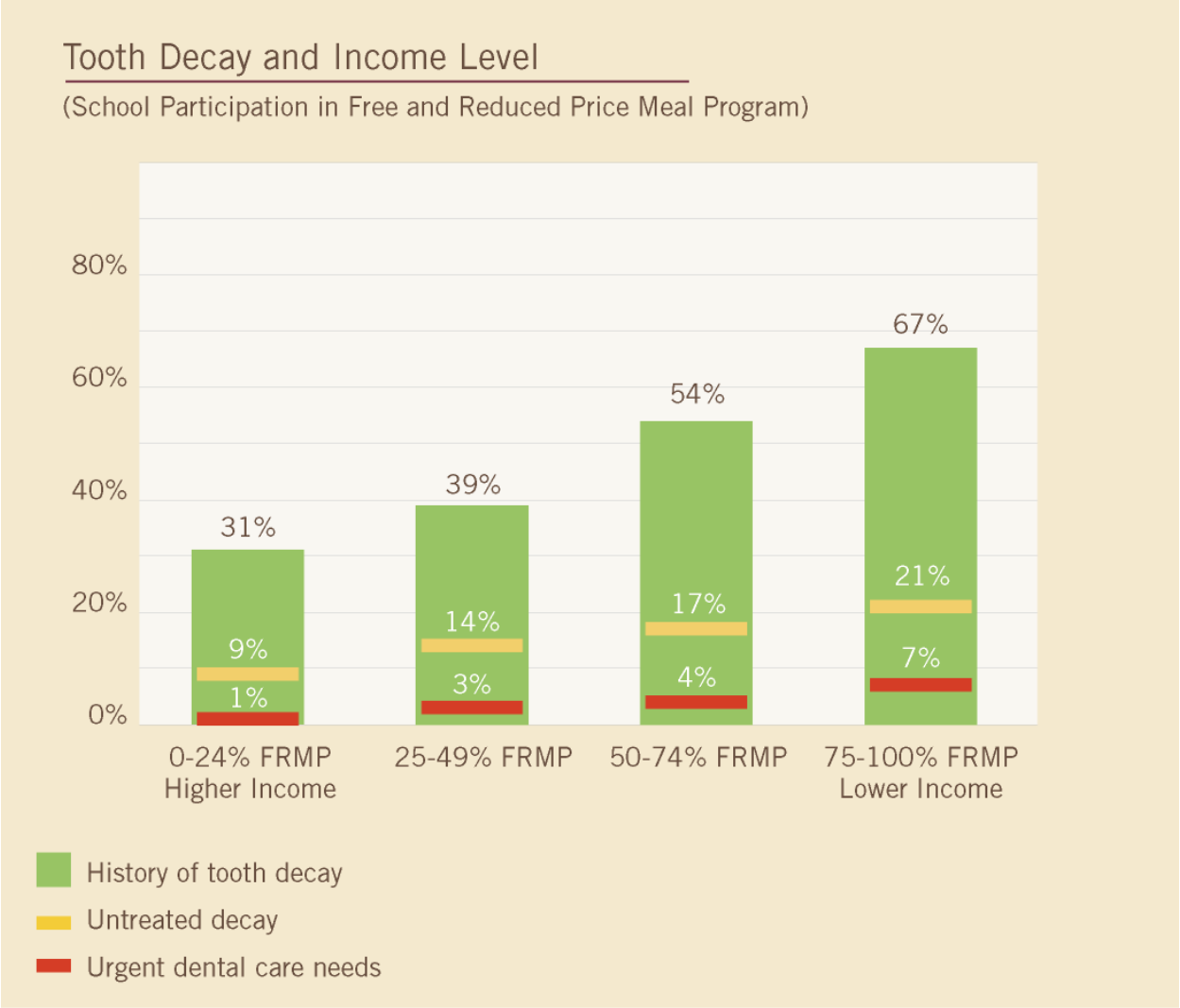
Untreated oral disease can have devastating health, developmental and social consequences for children. Even mild tooth decay can cause severe pain; infected or abscessed teeth can cause excruciating pain. Many children have learned to live with pain that most people would find unbearable. Often children do not understand that teeth are not supposed to hurt. They have never known anything different.

- **Early and long-term impacts on health.** There is a strong connection between oral health and overall health, starting even before birth. Bacteria from oral disease in pregnant women can cause slow fetal growth and low birth weight in infants, and may increase poor birth outcomes and neonatal mortality. Reservoirs of infection in a child's mouth from untreated decay can make a child vulnerable to ear and sinus infections. Chronic untreated dental disease in children and the resulting infection is linked with chronic health problems later in life such as diabetes, heart and lung conditions, and osteoporosis.[lxx]
- **Compromised physical development.** Children with dental pain from infected teeth and gums and children with tooth loss often do not get the nutrition they need to grow because pain keeps them from eating fresh, healthy foods. The resulting poor nutrition can slow physical growth and healthy development.
- **Effects on social development.** Untreated dental disease can cause tooth loss, which may make it hard to establish normal speech patterns and may delay social development. The embarrassment of brown, missing and decaying teeth can exaggerate the normal shyness of childhood and negatively affect self-esteem.
- **Impacts on school success.** Children suffering from the pain of untreated decay often miss many days of school, and even when in school, may have trouble paying attention, relaxing and participating. Pain from toothache can also cause sleep deprivation and interfere with concentration, and may derail a child's success in school. In 2007, about 11% of Sonoma County's children ages 5-17 missed one or more days of school because of dental problems.[lxxi]
- **Economic implications.** In 2007, more than 500,000 California children between the ages of 5 and 17 missed at least one day of school in a year because of dental problems, costing school districts $29.7 million dollars in lost revenue.[lxxii] California children's dental health was ranked third from the bottom in the National Survey of Children's Health, above only Arizona and Texas.[lxxiii] In the Bay Area, children and teenagers up to the age of 17 made nearly 1,980 visits to emergency rooms for preventable dental conditions in 2007.[lxxiv] The cost of these visits averaged $172, but if a problem required hospitalization, it cost an average of $5,000.[lxxv]

Key Findings on Children's Oral Health in Sonoma County

The evidence suggests that in many respects the epidemic of tooth decay may be even worse in Sonoma County. While better data on general oral health are needed in Sonoma County, data collected by local dental programs indicate that a very serious problem exists in this county.

- **Tooth decay is rampant among Sonoma County children.** In 2007, 76% of Sonoma County school children assessed by the Mighty Mouth Program over three years had a history of decay.[lxxvi] This exceeds the state average of 70% of children with a history of decay. The 2009 Sonoma County Smile Survey found that almost half of Sonoma County's kindergartners and about 60% of third graders have already experienced tooth decay, and over 16% of them have *untreated decay*.[lxxvii]
- **Untreated decay is a serious problem for Sonoma County children, especially for low- income children and Hispanic children.** In 2007, 39% of Sonoma County school children assessed by the Mighty Mouth Program over three years had untreated decay. Of these, 19% had emergent needs and 20% had urgent needs.[lxxviii] In 2009, more than 425 kindergartners and third graders have had serious problems from dental disease, such as abscesses, inflammation and pain. Extrapolated to all school children in Sonoma County, more than 2,800 children could be suffering from advanced dental disease.[lxxix] Low-income children have the highest levels of untreated decay. The 2009 Sonoma Smile Survey found that children in lower income schools, as measured by the percentage of children who participated in the Free and Reduced Price Meal (FRPM) program had a significantly higher rate of dental problems. Compared to children from schools where fewer children are enrolled in the FRPM program, children in schools where more than 75% of children participate in the FRPM program had a significantly higher prevalence of decay experience, untreated decay and urgent dental care needs. Among children in the schools with the highest participation in the FRPM program, 67% had a history of tooth decay, 21% had untreated tooth decay and 7% had the need for urgent dental care. In comparison, among children from the higher income schools (in which no more than 24% of the children participated in the FRPM program), only 31% had a history of tooth decay, 9% had untreated decay and 1% had a need for urgent dental care.[lxxx] These disparities are quite striking.



Source: Sonoma Smile Survey 2009.

Importantly for Sonoma County, where the Hispanic population is the fastest growing demographic group, Hispanic children experience more tooth decay, more untreated tooth decay and more urgent dental care needs than any other group. The 2009 Sonoma Smile Survey found that 65% of Hispanic children had a history of tooth decay as compared to 32% of white children. Hispanic children also had higher levels of untreated tooth decay (20%), compared to 11% in white children. Hispanic children also have a high rate of tooth decay, as seen in Table 2 below.

Table 2. Tooth Decay in Hispanic and White Children in Sonoma County 2006 and 2009

Year	History of Tooth Decay		Untreated Tooth Decay	
	Hispanic	White	Hispanic	White
2006	72%	48%	33%	20%
2009	65%	32%	20%	11%

Source: Sonoma Smile Survey, 2006 and 2009.

Hispanic children were three times as likely as white children to need urgent dental care (6% compared to 2%). As the population in Sonoma County becomes increasingly Hispanic oral health disparities will continue to grow.

- **Sonoma County is making progress in expanding dental coverage for children.** According to the California Health Interview Survey (CHIS), Sonoma County ranks in the bottom third of California counties for the number of children without dental insurance, 44th out of the 58 counties.[lxxxi] In 2005, CHIS reported that 83% of children had dental insurance, a rate that fell to 72% in 2007.[lxxxii] While the CHIS data provide the best available estimate of the percentage of children without dental insurance in Sonoma County, due to the relatively small sample size for our community, the CHIS data for Sonoma County are statistically unstable and unreliable for this indicator. Public Health Program enrollment data show that more children than reported by CHIS are enrolled in public health coverage. Due to the success of Healthy Kids Sonoma County or "the Children's Health Initiative" (CHI), enrollment in comprehensive health coverage, including dental insurance, among children has increased dramatically in the last six years. Before the CHI started, 12,169 children were enrolled in Medi-Cal; as of December 2010, 27,005 are covered, an increase of 121%.[lxxxiii] Fewer than 3,000 children were enrolled in Healthy Families before CHI. As of October 2010, total enrollment is 11,968, an increase of 299%.[lxxxiv] Before the CHI started, Kaiser Child Health Plan enrollment stood at 789. As of October 2010, enrollment in Kaiser Child Health Plan has increased 406% to 3,995 children.[lxxxv]
- **Children's insurance programs in Sonoma County do not provide equivalent coverage.** In Sonoma County, Medi-Cal, Healthy Families, Kaiser Child Health Plan, and Healthy Kids Sonoma County provide differing dental coverage and oral health care access. As a result of the CHI's success in enrolling children in health coverage, tens of thousands more families are paying health premiums for insurance that often provides good medical coverage, but little to no dental coverage for children who desperately need it. The success of Sonoma County's CHI highlights dental issues that were previously hidden or ignored when children had no coverage. Expanded health coverage prompts newly insured parents to seek dental care services for their children more often, which brings to light the unmet need for pediatric dental services that has existed in the county for years.
- **Children who depend on public health insurance experience major barriers to receiving dental care.** Many dentists will not accept patients with Medi-Cal Dental Program (Denti-Cal), because of low reimbursement rates and administrative burdens. This situation has worsened as a result of recent state level budget cuts. Fewer than half the pediatric dentists in the state accept Denti-Cal, and two-thirds of these limit the number of children with Denti-Cal they will see.[lxxxvi] In Sonoma County, even when children have dental insurance and a dental home through Medi-Cal, Healthy Families, Kaiser Child Health Plan or Healthy Kids Sonoma County, many must wait months for an appointment or must forgo needed services because they cannot afford the copayments for services or have reached their cap on individual expenditures. With the defunding of adult Denti-Cal, many community health centers and clinics and private providers are finding it increasingly difficult to maintain children's dental services. For these children, simply getting in to see a dentist can be a struggle. Receiving orthodontia, dental surgery or dentistry under anesthesia, which is often needed to treat ECC, can be impossible.
- **Children are not receiving urgent care for serious conditions such as Early Childhood Caries (ECC).** The 2009 Sonoma Smile Survey identified more than 425 kindergarteners and 3rd graders (4%) with serious, emergent problems from dental disease: abscesses, inflammation and pain.[lxxxvii]

- **Children are not receiving needed preventive dental visits.** The 2007 California Health Interview Study (CHIS) reported that 10.8% of adolescents and children two and older had never been to a dentist, as shown in Table 3. Another 5% had not been to a dentist for over one year. [lxxxviii]

Table 3. Length of Time Since Last Dental Visit, Children 2-17	**2001**	**2003**	**2007**
Less than 6 months ago	58.8%	64.0%	71.9%
6 to 12 months ago	20.7%	8.0%	12.2%
More than 12 months ago	8.0%	8.1%	5.0%
Never had a dental visit	12.6%	19.9%	10.8%

Source: www.kidsdata.org, from CHIS data.

- **Children are not receiving protective dental sealants in sufficient numbers.** Mighty Mouth program data showed that only 17% of children surveyed had sealants to protect their permanent teeth from cavity-causing bacteria, and that percentage was unchanged in the 2009 Sonoma Smile Survey. Only 3% of children in Sonoma County enrolled in Medi-Cal in 2003 had sealants applied to their first permanent molars.[lxxxix] The California Smile Survey, 2006 found that 28% of California children had sealants, compared to 17% of children in Sonoma County.
- **Sonoma County children do not have access to fluoridated drinking water.** Fluoridated drinking water has proven to be the most effective public health measure for prevention of tooth decay.[xc] Though a large number of Americans, 67%, receive fluoride through the public water supply,[xci] the vast majority of Sonoma County residents do not: only 3% of the public water supply in Sonoma County is fluoridated.[xcii] Among the cities, only Healdsburg fluoridates its water. Those living outside the cities may draw their drinking water from private wells and may not fluoridate the water they draw. In addition, most bottled drinking water is not fluoridated.
- **Education for parents and children is essential to good oral health.** Education of parents and children concerning good dental care is a critical need. Because the issue is complex and the information has changed since parents themselves were children, education that reaches parents, even as part of prenatal education, is seen as a necessity. The American Pediatric Dental Association now recommends that a child's first dental visit come before the first birthday, as baby teeth play a key role as placeholders for permanent teeth. It has been shown that dental caries are transmissible, so healthy mouths for parents and caregivers are closely linked to healthy mouths for children. Teaching parents about the dangers of sugary drinks, including fruit juices and other foods crosses all socioeconomic groups.

Key Indicators to Track Progress

Indicator
The percentage of kindergarten and 3rd graders with untreated tooth decay in primary or permanent teeth.
The percentage of low-income children with emergent or urgent (Class II or III) dental needs.
The percentage of children ages 2-18 with dental insurance.

The percentage of children aged 2 years and older who have not seen a dentist in the previous 12 months.
The percentage of children with dental sealants.
The percentage of children with access to fluoridated public water.

Accomplishments and Progress Made Since 2008

Collaboration has become a growing feature of oral health care in the county, with effective efforts and innovation in many quarters. These include meetings of Redwood Community Health Coalition's dental director meetings and the Sonoma County Oral Health Access Coalition, Save Our Smiles, Mommy and Me, Mighty Mouth and the new "Task Force on Oral Health, convened in 2011 to develop recommendations for local action to improve oral health for low-income children and adults. Sonoma County's expanding oral health programs have been identified as best practices or worthy of special mention such as oral health access at Women, Infants and Children (WIC) sites and Mighty Mouth.

While, overall, the percentage of children who went to the dentist in the past year decreased, St. Joseph Health System experienced a 20% increase in such visits for children ages 0-5 and a 26% increase in one-year-olds who received their first dental visit. While statewide oral health surveys have lost funding, Sonoma County has continued its tracking of children's oral health status in 2010, and has preserved and fostered programs for community education as well as programs for special needs dental care. Children's oral health has seen increased community awareness through community health screenings and more news stories in local media.

Current Service System Resources, Gaps, and Opportunities

Resources

Many children in Sonoma County, both with and without dental insurance, have annual or biannual visits to the dentist, get a check up and cleaning and, if necessary, restorative treatments. By most accounts, there is no lack of access to general dental services for children with private dental insurance or whose families can afford care. For uninsured children or children with public insurance, the primary source of dental services is the community health center network. Sonoma County's seven community health centers are the primary medical home to approximately 40,000 Sonoma County children and teenagers, and provided over 120,000 primary care visits to this population.[xciii]

Sonoma County's community health center network has five dental clinics in health centers throughout the county: Alliance Medical Center, Alexander Valley Medical Center, Petaluma Health Center, Russian River Health Center and Sonoma County Indian Health. While Sonoma County's community health centers employ approximately 17% of all practicing primary care physicians in Sonoma County,[xciv] they employ fewer than 2% of practicing dentists in Sonoma County.[xcv] In 2009, Sonoma County's 5 community health centers employed 13.87 FTE dentists who provided 34,500 patient visits, including children and adults.[xcvi] Fortunately, St. Joseph Health System operates two licensed dental clinics, which provided 9,409 dental visits in 2009: 6,314 dental visits at its pediatric dental clinic, and an additional 3,195 through its mobile dental clinic. Additionally, St. Joseph Health System operates the Mighty Mouth program, which currently provides fluoride varnish to approximately 6,500 children per year.

Save Our Smiles. Save Our Smiles, a program of Community Action Partnership (CAP), is a direct outgrowth of AB 1433's requirement for school entry dental screening. This program identifies and promotes best practices in prevention and early detection of childhood caries by means of the Sonoma County Oral Health Access Coalition advocacy, prevention and community activities.

Mighty Mouth Program. Mighty Mouth is an elementary grade school program in which dental professionals go into schools and provide fluoride varnish. The model includes two sessions, one at the beginning and one at the end of the year. St. Joseph Health System currently provides support and funding for this program, after state funding ended.

Women, Infants and Children (WIC) sites as entry for dental services. Sonoma County's WIC program is one of ten in the state that offers a dental component that includes screening, risk assessment, fluoride varnishes, and parent/child education, in English and Spanish. First 5 Sonoma County, in collaboration with the Dental Health Foundation, identified the WIC Supplemental Nutrition Programs as service sites to provide preventive dental care to low-income children. With one of every two newborns in Sonoma County eligible for WIC services, using WIC as service sites for preventive dental care provides an opportunity to reach at-risk children from one to five years old.

First 5 Sonoma County contracts with Community Action Partnership of Sonoma County (CAP) to provide assessment, fluoride varnish applications, referrals and education for parents at two of the four county-operated WIC sites in Santa Rosa and Sonoma Valley, and plans to expand to the Guerneville and Petaluma sites. In addition, services should soon be available at WIC sites operated by Alliance Medical Center and Sonoma County Indian Health Project. The Dental Health Foundation is providing technical assistance to CAP for the development and implementation of systems to enable WIC to serve as the entry point for dental care services and to establish claiming and billing systems to ensure reimbursement for long-term program

sustainability.

Registered Dental Hygienists. In the effort to build prevention programs in a proactive manner, Sonoma County is utilizing Registered Dental Hygienists (RDH) to provide dental hygiene care and preventive services to special populations in alternative settings where people live or frequent, rather than the traditional dental office or health center. This is part of the RDH Alternative Practice (RDHAP) program established in 1998 by the California legislature to make dental health more accessible to special populations.

Gaps

Access to dental care. Sonoma County's oral health safety net is inadequate to meet the primary and preventive oral health needs of our community's low-income children. Healthy Kids Sonoma County (HKSC), which includes oral health coverage for its member children, has been working with Delta Dental to expand its provider network, especially its network of pediatric dentists. The children enrolled in Kaiser Child Health Plan are also enrolled in Delta Care through Delta Dental.

For children with publicly-funded dental insurance (Denti-Cal), access to dental care is limited. Since so few private practice dentists accept Denti-Cal, those community health centers offering dental services are often the only resource for these families.

In spite of the work of the community health centers, gaps in service remain. Many children experience difficulty in accessing oral health services, waiting months for primary dental visits, and finding special care access almost non-existent.

While more children will have dental care coverage with implementation of Health Care Reform in 2014, the capacity of the delivery system must be significantly increased to meet the oral health needs of Sonoma County's children.

Specialty services. The community health centers with dental services do not offer some critical restorative services such as root canals, oral surgery, tooth replacements, or orthodontia. There is also a documented need for dental services for children with special needs requiring special care or sedation to receive dental treatments.

Fluoride policy. Fluoride is a proven way to prevent tooth decay in children. In a review of 21 studies discussed by the Community Fluoridation Foundation, tooth decay among children was shown to decrease between 29 and 51% compared to control groups, and the decrease crossed socioeconomic groups.[xcvii] Policymakers seeking to fluoridate the public water supplies have repeatedly met with the barriers of cost and infrastructure challenges, as well as a group expressing public opposition.

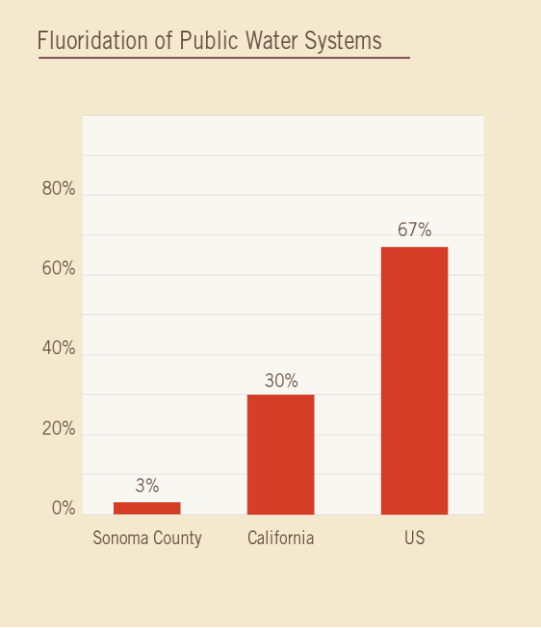
The Case for Fluoride – An Opportunity to Make Positive Change
"The most effective strategy to improve oral health in Sonoma County is to fluoridate the public water supply." *Mary Maddux-Gonzalez, M.D., Health Officer, County of Sonoma*
Fluoride is the single most effective public health measure to reduce tooth decay. A naturally occurring element found in trace amounts in untreated water, fluoride is proven to inhibit and even reverse the progression of tooth decay. Since community water fluoridation benefits everyone – young and old, low and high income – it is an especially effective prevention tool. In addition to fluoridated water, we can obtain fluoride in: • Toothpaste • Fluoride rinses, mouthwashes, supplements or gels • Treatments at the dentist and doctor such as fluoride varnishes

Sonoma County pediatric dentists and public health officials consider the lack of fluoride to be a primary reason for the high levels of tooth decay in children.

- Californians spend $4 billion annually on dental care, with $700 million paid by taxpayers for publicly funded dental programs.[xcviii]
- Nationally, more than 51 million school hours are lost each year to dental-related illness. [xcix]
- Every dollar spent on community water fluoridation saves between $7 to $42 in treatment costs, depending upon the size of the water system.[c]

The expenditures necessary to fund comprehensive prevention programs and fluoridate water supplies can realize huge benefits in savings over the long term.

"Fluoride in the public water supply is hugely important to the oral health of children. We perform many more restorative procedures in California than are necessary due to lack of water fluoridation." Martin Steigner, DDS, Petaluma Pediatric Dentist



Opportunities

Since the 2008 Needs Assessment, changes have occurred at the federal, state and local levels that have the potential for important impacts on oral health for Sonoma County children.

Legislation

The 2007 Kindergarten Oral Health Legislation AB 1433 requires dental screenings by May 31 of a child's first year in school. (*Note: Unfortunately, due to state budget cuts, school districts are not required to implement the law)*. This requirement is intended to:

- Raise parents' awareness of the importance of oral health to overall health and readiness to learn.
- Connect children with dental professionals who can care for their oral health.
- Assist in enrolling children in government benefit programs, such as Medi-Cal and Healthy Families.
- Maximize existing systems of care and reimbursement before creating new systems.
- Identify locally specific barriers-to-care to assist communities in responding to their children's oral health needs.
- Provide data for further advocacy.

Health Care Reform may have a positive effect on oral health care in terms of access, insurance, prevention and infrastructure. All insurance plans that will be made available through state exchanges for the uninsured and small groups will be required to include oral care for children and will provide preventive services for no charge. These insurance companies are barred from charging out of pocket expenses for preventive services. School-based health centers will be eligible for grants to provide oral health services.

Sonoma County Focus Areas

- The 2009 Sonoma Smile report identified five priority areas for oral health:
  - Promote early and regular oral health education and screening as a standard of practice in all prenatal and pediatric primary care settings.
  - Assure that every child is connected to a "dental home" by age 1. Improve access to dental insurance for low-income families.
  - Assure that all children begin regular dental visits for screening and preventive care within the first year of life and continue every six months thereafter. Children with special needs should be seen every three months.
  - Enhance children's access to fluoride. Promote the use of fluoridated drinking water, fluoride varnishes, fluoride toothpaste and rinses, and fluoride tablets.
  - Provide sealants to all children when permanent molars erupt at 6-7 years and again at 12-13 years.
- **The Children's Health Initiative (CHI)** has identified three priority areas for improvement:
  - Every child enrolled in Delta Care should have access to an appropriate dental home in the community where he or she lives;
  - Delta Dental's provider network needs to expand to include pediatric dentists; and
  - Every child enrolled in Delta Dental should have access to specialty dentistry in Sonoma County.
- **The Redwood Coalition Health Coalition (RCHC), Health Action, and Maternal Child and Adolescent Health (MCAH)** are supporting a growing movement to make primary medical care more reliable and easier to access, and for the medical care provided to be centered around each patient. This model is known as a patient centered medical home. Integration of

oral health and behavioral health services and the emphasis on prevention will be hallmarks of this redesign.

- **Fluoride varnish,** which provides a highly concentrated, temporary dose of fluoride to the tooth surface, has been shown to be effective in reducing tooth decay. The use of fluoride varnish to prevent and control dental caries in children is expanding in both public and private dental practice settings and in non-dental settings such as medical well child visits and at WIC sites. It is a relatively inexpensive process that can be done as part of a regular medical well child visit and can be administered by a variety of trained personnel.
- In 2011, Sonoma County will convene a Task Force on Oral Health to develop an Action Plan for Improving Oral Health for Children and Adults in Sonoma County. The Task Force will assess the oral health needs of Sonoma County's low-income children and adults, identifying barriers to prevention and care and developing specific near-term program and policy recommendations to improve oral health. Sponsor organization representatives will function as a high-level steering group and will include the Department of Health Services, Redwood Community Health Coalition, First 5 Sonoma County, and Sonoma Health Alliance. The Task Force will represent diverse stakeholder organizations that have the capacity to advance the recommendations. It will build on work on the capacity, coverage and education issues already identified by many of the participating agencies.

What Will It Take to Make Progress on Children's Oral Health?

The Surgeon General has "called upon policymakers, community leaders, private industry, health professionals, the media, and the public to affirm that oral health is essential to general health and well-being and to take action. No one should suffer from oral diseases or conditions that can be effectively prevented and treated. No schoolchild should be found unable to concentrate because of the pain of untreated oral infections. No children should experience poor oral health because of barriers to access to care and shortages of resources and personnel."[ci]

Spectrum of Prevention

The suggested activities at each level of the Spectrum of Prevention are opportunities for improving the oral health of Sonoma County's children.

Strategies	*Activities*	*Resources and Innovations*
Influencing policy and legislation	• Advocate for fluoridation of public water supplies. • Advocate for increased funding for children's dental services at community health centers. • Advocate for expansion of dental insurance programs and improved provider networks. • Commission a countywide survey every three to five years on progress toward improving children's oral health.	• Redwood Community Health Coalition • Health Action
Mobilizing neighborhoods and communities	• Identify common goals and a set of community indicators for children's oral health. • Establish community advisory	• The Sonoma County Oral Health Access Coalition

Strategies	*Activities*	*Resources and Innovations*
	groups on dental health to advise policymakers.	
Changing organizational practices	• Assure that every child is connected to a dental home by age 1. • Provide sealants to all children when permanent molars erupt at 6-7 years and again at 12-13 years. • Enhance children's access to fluoride. Promote the use of fluoridated drinking water, fluoride varnishes, fluoride toothpaste and rinses, and fluoride tablets.	• Redwood Community Health Coalition • First 5 Sonoma County • School Wellness Policy • The Task Force On Oral Health
Fostering coalitions and networks	• Support the Sonoma County Oral Health Access Coalition and other networks of dental providers. • Encourage childhood obesity, nutrition and oral health coalitions to understand the linkage between their respective issues and to work together.	• Redwood Community Health Coalition • The Sonoma County Oral Health Access Coalition • Health Action
Educating providers	• Change the medical system's and public's knowledge and perception of oral health and disease though making oral health an accepted part of overall health care and services. • Encourage health care providers to detect dental caries as a primary health care prevention strategy. • Educate and train teachers, nurses, childcare providers and all other program staff who serve children about children's oral health issues.	• Redwood Community Health Coalition • The Sonoma County Oral Health Access Coalition • The Pediatric Dental Initiative (PDI) • School Wellness Policy
Promoting community education	• Integrate oral health messages into communications with children and families at all service sites.	• School Wellness Policy • First 5 Sonoma County

Strategies	Activities	Resources and Innovations
Strengthening individual knowledge and skills	• At every opportunity, educate parents about the importance of early and periodic dental visits for children. • Expand education programs for families about oral health and hygiene.	• School Wellness Policy • Mommy and Me • Mighty Mouth • Women Infants and Children Program (WIC) • The Pediatric Dental Initiative (PDI)

Childhood Obesity, Nutrition, and Fitness

> ***"The childhood obesity epidemic in America is a national health crisis… The life-threatening consequences of this epidemic create a compelling and critical call for action that cannot be ignored."*** **-** *Solving the Problem of Childhood Obesity Within a Generation: White House Task Force on Childhood Obesity Report to the President*, May 2010.

Sonoma County continues its intense focus on the epidemic of obesity, especially childhood obesity, since the last Community Health Needs Assessment (2008-2011) highlighted the impact on people's lives, and the impact in the community. As obesity rates continue to skyrocket, even young children are experiencing type 2 diabetes, high blood pressure and other physical consequences, as well as emotional problems.

Sonoma County government, community-based resources and grassroots groups have emerged to promote healthy eating and physical activity. Community Activity and Nutrition Coalition (CAN-C) along with Health Action, are working to track, educate and intervene with livable, workable solutions to this health crisis. Bringing together local community members, schools, health organizations, businesses, local governments, and public health leaders, these initiatives are focused on making schools and communities healthier. Healthy Eating Active Living (HEAL), iGROW, iWALK, Healthy Students Initiative and Safe Routes to School are just some of the efforts. The new Healthy, Hunger Free Kids Act of 2010 will channel additional funding and require nutritional standards for school lunches and foods sold at schools, leading toward healthier options. While these efforts are exciting, innovative and collaborative, they are still in their early stages of development and have not yet resulted in lower rates of obesity. It is essential that these initiatives be allowed to grow and reach fullness, with close monitoring and flexibility to make changes as circumstances change.

Experts agree that childhood obesity is a preventable public health crisis, a crisis that can be stopped only by changing children's food and activity options and the surroundings in which they live. The Surgeon General's Call to Action to Prevent and Decrease Overweight and Obesity (2001) addresses head-on one of the key misconceptions about the obesity epidemic: "Many people believe that dealing with overweight and obesity is a personal responsibility. To some degree they are right, but it is also a community responsibility." Much research has focused on educating children and changing their behavior, but these approaches have had limited success.[cii] Changing the environments in which children live, eat and play is now seen as an essential strategy in fighting the obesity epidemic. Communities, schools, workplaces and homes can influence people's health decisions, and all must be part of the solution.

> ***"We all can agree that in the wealthiest nation on earth all children should have the basic nutrition they need to learn and grow and to pursue their dreams, because in the end, nothing is more important than the health of well-being of our children. Nothing."*** - Michelle Obama, 2010

Overweight and Obesity Defined

Overweight and obesity are complex issues related to lifestyle, environment and genes. At its most basic level, a body becomes overweight (weighing more than is considered healthy) when there is an imbalance between the amount of calories consumed and the amount of physical activity used to burn those calories.

Overweight and obesity in adults are generally defined by using the Body Mass Index (BMI) calculation. A BMI of 25 is considered overweight, 30 or more is considered obese.

- Overweight for children and adolescents is defined as falling between the 85th to the 95th percentile on the children's BMI charts. Obesity is defined as being more than the 95th percentile on the BMI chart.
- The American Obesity Association (AOA) uses the 95th percentile of BMI as a criterion for obesity because it:
  - Is recommended as a marker for when children and adolescents should have an in-depth medical assessment.
  - Identifies children who are very likely to have obesity persist into adulthood.

The Story Behind the Problem

The past 30 years have seen many dramatic changes in the way Americans work, live and eat.[ciii] Complex biological, social and environmental conditions contribute to the challenges our children face in making healthy decisions about eating and physical activity.

Over the past three decades, the national prevalence of overweight has doubled among preschool aged children and adolescents, and the prevalence has increased threefold among children ages 6 to 11 years old.[civ] Childhood overweight and obesity has reached such epidemic levels that the Surgeon General compared it to the threats of bioterrorism and smallpox, calling it "the fastest-growing, most threatening disease in America today."[cv] Obesity rates have more than tripled among children and adolescents, making today's youth the most inactive generation in American history: one in three (31.7%) children ages 2-19 is overweight or obese. The current generation may even be on track to have a shorter lifespan than their parents. [cvi]

> ***"The modern America of obesity, inactivity, depression and loss of community has not 'happened' to us. We legislated, subsidized, and planned it this way. In 1973, 66% of kids either walked or biked to school. In 2000, only 13% did. As strapped as we are in California for educational funds, we are now spending more than a billion dollars a year on school buses to do what kids' legs used to do."*** - Dr. Jackson, former director of the National Center for Environmental Health at the Centers for Disease Control and Prevention

Contributing Factors

> ***"As kids are exercising less and eating more, health care and policy experts see a perfect storm ahead."*** [cvii]

The obesity epidemic is the result of complex and intertwined factors, including: the built environment/community planning, diet, sedentary lifestyles, genetics, cultural issues, access to healthy foods, media and nutritional literacy, the availability of relatively few medical interventions, and competition for scarce public dollars. Obesity cuts across all socio-economic levels, although it can also be seen within the context of social determinants of health. It is most prevalent in low-income communities where families confront challenges that contribute to poor nutritional status, low fitness levels and reduced access to preventive health care.

Poor Nutrition	***Sedentary Lifestyle***
• Limited access to healthy, affordable foods in low-income neighborhoods • Fewer family meals eaten together • Prevalence and consumption of inexpensive, high-calorie, fast foods and beverages that are high in calories, fat and salt, and low in fiber • Higher cost of nutritious, lower calorie foods like fruits, vegetables, lean meats, chicken, fish and whole grains • Trend to larger portions of restaurant and fast-foods • Extensive advertising and marketing of unhealthy food products targeted toward children and youth	• An imbalance between the calories consumed and the calories used • Increased use of electronic media - at the expense of outdoor play • Fewer children and youth spend time outside of school in physical activities • Inaccessible child activity programs due to cost or transportation • Eliminated or severely curtailed physical education during school day • Neighborhoods with limited infrastructure for physical activity and recreation • Community design which emphasizes car travel and discourages physical activity

Policy. Well-designed communities and built environments are essential to ensuring that children achieve optimal health and development. And yet, policymakers have inadvertently fueled the obesity epidemic. Many common pediatric conditions, such as obesity, are associated with risk factors linked to the environment in which children live, yet parents, community leaders, and policymakers do not always make the connection between access to parks and recreational facilities, safe streets, and bike lanes with child health.

School systems have contributed to the current condition in both their food and fitness policies. Limiting funding of school meals program has forced school food service to rely upon vending and a la carte programs that sell foods and beverages high in calories and low in nutrients, as well as candy and bake sale fundraisers.

With decreased funding, and increased pressure to improve test scores, many schools have eliminated physical education, despite data showing that physical activity improves learning for most children. The elimination of recess and physical education classes also means that many children, especially low-income children whose parents cannot afford after school sports, do not learn to participate in physical activities that will provide them with lifelong exercise options.

Societal factors. The past few decades have seen significant change in American society. Adults are working harder, traveling farther to work, and becoming more and more dependent on automobiles for transportation. Increased safety concerns discourage parents from sending their children unattended out to play. Children's lives are packed full of extra-curricular activities to which they must be driven because of distance and safety concerns. Children are eating too much fast food and soda and are immersed in sedentary technology rather than vigorous outdoor play. According to the Youth Risk Behavior Surveillance Survey 2009, nationwide, children ages 8–18

spend the following amount of time in front of the screen, daily: approximately 7.5 hours using entertainment media, approximately 4.5 hours watching TV, approximately 1.5 hours on the computer, and over an hour playing video games, and 25 minutes per day that children spend reading books.[cviii] At the same time, only 18.4% of students were physically active doing any kind of physical activity that increased their heart rate and made them breathe hard some of the time for a total of least 60 minutes per day on each of the 7 days before the survey (i.e., physically active at least 60 minutes on all 7 days).[cix] Advances in our culture have brought with them many positive changes, but have also brought with them the "perfect storm" of childhood obesity.

Socioeconomic factors. Low-income families are especially vulnerable to poor nutrition and overweight. People living in low-income communities have more health problems and higher mortality than residents of areas with a higher proportion of large grocery stores, when other factors are held constant.[cx] The presence of a supermarket in a neighborhood is linked to higher fruit and vegetable consumption and lower rates of overweight and obesity.[cxi] Studies show that many low-income communities exist in an "imbalanced food environment" (also called "food deserts") where fast food outlets and corner stores offering high-fat, high-sugar convenience foods and few fresh fruits and vegetables are more convenient and more numerous than large grocery stores. A report issued in 2002 by the Urban and Environmental Policy Institute revealed that middle- and upper-income neighborhoods have more than twice as many supermarkets as low-income neighborhoods.[cxii]

Options for regular physical activity for children are also more limited in low-income areas, because of safety concerns and poorly designed neighborhoods with limited opportunities for recreation. Low-income families do not choose to live where it is unsafe for their children to play. They live there because of the affordability of housing. With the high cost of housing, the likelihood that all adults in a household are working is high, and therefore dependent on their local fast food places to put food on the table.

Affordability of healthy food and food insecurity. Studies have shown that the cost of foods laden with fats and sugars have remained stable, while the costs of healthy foods, especially fruits and vegetables, as well as sources of protein, have risen substantially, making poor nutrition choices the most affordable choice for a family with food insecurity.[cxiii] Food insecurity can have grave consequences including poor dietary intake and nutritional status, poor health, increased risk for the development of chronic diseases, and devastating effects on cognitive and social development and academic achievement.[cxiv] Presently, there are 78,000 people using the Redwood Empire Food Bank monthly. While there is controversy about the link between obesity and food insecurity,[cxv] it is clear that the lack of access to supermarkets, affordable fruits and vegetables and protein is a nutritional concern.

Calorie consumption. A changing environment has broadened food options and eating habits. "Super-sized" portions in America are becoming the norm, particularly in restaurants and fast-food establishments. People are eating more during meals and snacks because of larger portion sizes and as a result are consuming more calories.[cxvi] Grocery stores stock their shelves with a greater selection of convenient pre-packaged and processed food products that tend to be high in fat, sugar, salt and calories. Research by Leanne Birch, Pennsylvania State University Professor and known expert on childhood obesity, reveals that children do not overeat if given too much food at age three but by age five, they do.[cxvii]

Good Nutrition begins in infancy. Overwhelming scientific evidence shows that breast milk is the optimal food for infants. The Centers for Disease Control and Prevention identifies increasing breastfeeding as one of its obesity prevention strategies for children. Children who are breastfed

are less prone to overweight, asthma and some childhood infections. Now 70% of women with young children work outside of the home and two-thirds return to work within six months after giving birth. Women who return to work soon after giving birth breastfeed for a shorter period than other women or not at all.[cxviii]

Parental knowledge and practices. Engaging and supporting parents and other caregivers is a crucial link to success in addressing childhood overweight. Parental beliefs, perceptions and role modeling about healthy eating and levels of physical activity play a large part in directing and supporting children's choices. Additionally, parents influence the nature and amount of physical activity in which their children engage and may not recognize the importance of this in reducing the potential of obesity.[cxix]

> ***"Kids imitate parents. Parents have power, and carry weight. With kids, parents are the voice of authority and permission. With administrators and school boards, they're the voice of the taxpayer. It only makes sense for us to try to engage parents in our efforts."*** - Katie Bark, Montana State University Nutritionist

Advertising and food choices. A link exists between food and beverage advertising and rising childhood obesity rates. Scientific research shows that advertising influences children's preferences and purchase requests.[cxx] Research suggests that the mere appearance of a television or movie character with a product can significantly alter a child's perception of that product.[cxxi]

Obesity is one of the most stigmatizing and least socially acceptable conditions in childhood. One study conducted by researchers at UC San Diego found, similar to others it reviewed, that obese children and adolescents demonstrated significant impairment in psychosocial health when compared with healthy children and adolescents: .9 times as high.[cxxii]

There are no easy solutions. The key to controlling the development of obesity lies in uniting public and private sectors behind the message that healthy weight is critical to long-term health. Healthy weight can generally be achieved and maintained through moderate daily exercise and a well-balanced, portion-controlled diet. The recommendation to consume vegetables and fruits for protection from chronic diseases is based on studies linking higher consumption of vegetables and fruits to lower rates of cancer, cardiovascular diseases and other chronic diseases.[cxxiii] Current recommendations are to consume at least five servings of vegetables and fruit each day.

However, trying to change specific eating behavior requires a complex combination of policy, advocacy and social marketing. Without providing ways to change how we think and feel about food and food habits, nutritional advice, exhortations to exercise and medical advice will have little impact. Community leaders need to provide enough resources toward maintenance of parks, playgrounds, community centers and physical education opportunities. Insurers and health plans must partner with employers, patients and physicians to both prevent obesity and build integrative care systems for overweight and obese individuals, incorporating dietitians, health therapists and exercise specialists. And the media and entertainment industries need to show that physical activity is healthful and fun. Nothing short of a team approach will meet the challenges this critical issue presents.

The Consequences of Poor Nutrition, Overweight and Obesity

> ***"The consequences of ignoring obesity are increasing levels of serious illness and rising health costs."*** The International Obesity Task Force

As the prevalence of overweight and obesity continues to rise, the long-term health and economic consequences will be staggering. This increase represents a major public health concern with the potential for future health risks and growing burdens on the healthcare system. Many health conditions once thought applicable only to adults are now being seen in children and with more and more frequency. Children are also more vulnerable than adults to a unique set of obesity-related health problems because their bodies are growing and developing.[cxxiv]

- **Preventable deaths.** Lack of physical activity and poor nutrition account for approximately 112,000 preventable deaths each year in the United States, making these risk factors second only to tobacco use as causes of preventable death.[cxxv]
- **Increased risk for developing chronic health conditions.** Unless trends change, one in three children born in the year 2000 will develop type 2 diabetes. One in two children of color born in 2000 will develop the disease.[cxxvi]
- **Increased risk for other health problems.** Excess body weight increases the risk of many health conditions, including: asthma, sleep apnea and respiratory problems, orthopedic conditions, and high blood pressure. Obese children are also more likely to have increased risk of heart disease. One study found that approximately 70% of obese children had high levels (greater than 90th percentile) of at least one key risk factor for heart disease, and approximately 30% had high levels of at least two risk factors.[cxxvii]
- **Impact on social and emotional development.** Children who are overweight may suffer from social stigma, discrimination, lowered self-esteem, and depression.[cxxviii; cxxix] They tend to participate in fewer activities, to withdraw from social situations, and to be less physically active than their normal-weight peers. One study found that they have a similar quality of life as children diagnosed with cancer.[cxxx]
- **Increased risk for injuries.** Injuries seem to occur more often in overweight individuals, likely due to decreased flexibility and lower bone density. Efforts to promote optimal body weight may not only reduce the risk of chronic diseases but also the risk of unintentional injury among overweight and obese individuals.[cxxxi]
- **School days missed due to overweight.** Overweight students miss, on average, one day of school per month. Absenteeism among overweight students is twenty percent higher than that of their peers.[cxxxii]
- **Long-term impact.** Overweight adolescents have a 70% chance of becoming overweight or obese adults, putting them at greater risk for heart disease, stroke and diabetes later in life. This increases to 80% if at least one parent is overweight or obese.[cxxxiii]

High Costs and Financial Barriers of Obesity and Overweight

- Each year, obese adults incur an estimated $1,429 more in medical expenses than their normal-weight peers. Overall, medical spending on adults that was attributed to obesity topped approximately $40 billion in 1998, and by 2008, increased to an estimated $147 billion. Excess weight is also costly during childhood, estimated at $3 billion per year in direct medical costs.[cxxxiv]
- Medical costs associated with obesity are greater than those associated with both smoking and problem drinking.[cxxxv]
- Costs associated with obesity, overweight and physical inactivity in 2006 were estimated to be $41 billion in California and $436.7 million in Sonoma County, an increase of 33% since 2000. The same report projects that the costs to the state will rise to $52.7 billion, with a

similar increase in Sonoma County. Half the costs are for medical treatment and medication and half the costs are lost productivity. A 5% decrease in obesity and overweight or increase in physical activity could save $6 billion statewide.[cxxxvi]

- Absenteeism among overweight children costs the average California school district $160,000 per year per district.[cxxxvii] With 40 school districts in Sonoma County, that could mean $6.4 million in lost funding for our schools.

Key Findings on Childhood Obesity, Nutrition and Fitness in Sonoma County

- **Low-income children in Sonoma County are at highest risk for overweight and obesity.** The highest rates of obesity occur among population groups with the highest poverty rates. Children ages 5-11 years from low-income homes are exhibiting increasing rates of overweight, while youth ages 12-19 from low income homes are showing an increase in obesity.[cxxxviii] Table 4 below shows the prevalence of overweight and obesity among low-income children 2-19 years old in Sonoma County averaged in the years 2005-2007 and 2007-2009.

Table 4. Prevalence of Overweight & Obesity in Children 2-19 years, 2005-07 & 2007-09

Table 4.	2005 – 2007	2007-2009
Overweight BMI 85th - <95th		
2-4 years	16.7%	16.2%
5-11 years	20.0%	20.5%
12-19 years	19.7%	20.9%
Obese BMI >95%		
2-4 years	16.4%	15.9%
5-11 years	22.7%	22.6%
12-19 years	23.4%	23.6%
Overweight or Obese		
2-4 years	33.1%	32.1%
5-11 years	42.7%	43.1%
12-19 years	43.1%	44.5%

Source: Pediatric Nutrition Surveillance System (PedNSS), CA DHS Children's Medical Services Branch and the Centers for Disease Control, 2009.

- **Higher rates of overweight and obesity are reported among Hispanic children, ages 5-19.** In 2008, Sonoma County's Hispanic children and teens represent higher rates of overweight and obesity than their white non-Hispanic counterparts.[cxxxix]
  - 21% low-income Hispanic children (5-19) were overweight and 25% were obese, while 16% of Hispanic children under age 5 were overweight and 16% were obese in 2008.[cxl]
  - 18% white non-Hispanic children (5-19) were overweight and 17% were obese (a decrease of 3% since 2005) and 17% of white, non-Hispanic children under age 5 were overweight and 12% of white, non-Hispanic children under age 5 were obese in 2008.[cxli]
- **Sonoma County youth are not consuming the five daily recommended servings of fruits and vegetables.** The percentage of Sonoma County teens meeting this recommendation fell from 48% in 2003 to 31% in 2005.[cxlii] In 2007, 60.9% of children ages 2 and older reported eating five or more servings of fruits and vegetables per day, a significant increase from 50.8% of the same age group two years earlier.[cxliii] Possible explanations of the difference between the teen rate and the rate including all children over 2 could include

parental involvement in food choices is stronger for younger children, younger children have less access to fast food places and less autonomy in their food choices, food choices at or near high schools and youth gathering places might be less healthy, and fast food is less expensive than healthy food in a teen's budget.

- **Many students are not meeting basic fitness standards.** Regular physical activity in childhood and adolescence improves strength and endurance, helps build healthy bones and muscles, helps control weight, reduces anxiety and stress, increases self-esteem, and may improve blood pressure and cholesterol levels.[cxliv] Each year students in the 5th, 7th and 9th grades are evaluated for six basic fitness areas. In 2005-2006 and 2008-2009, only 35% of Sonoma County 7th graders met all six of the basic fitness standards.[cxlv, cxlvi] Only 32% of 2008-2009 5th graders met all six standards, while 42% of 9th graders met them.[cxlvii] According to the 2008-2009 California Physical Fitness Report, 29.6% of 5th graders, 25.9% of Sonoma County 7th graders, and 26.7% of 9th graders failed the Aerobic Capacity Test.[cxlviii] While having the lowest pass rate among the grades tested, the 7th graders experienced a substantial improvement from 2005-2006 when 30.9% failed.[cxlix]
- **Anemia is prevalent among low-income children.**[cl] Sonoma County ranks among the counties in California with the highest prevalence of anemia, a condition that can cause delays and long-term consequences in infant and child brain development. In 2005 and 2008, the prevalence of iron deficiency among children under age 5 was 18%. In 2009, the rate had dropped to 16.5%. Among children 5 to 19, the rate was 13% in 2005, and climbed to 16.5% in 2008, and fell back to 13.4% in 2009, 28th highest rate in the State.[cli] In 2008, the rate was significantly higher for Hispanic children 5 to 19 (17%) than for white, non-Hispanic children of the same ages (11%).[clii]
- **Food insecurity is linked to overweight in Sonoma County.** Low-income children, generally living in poor neighborhoods, are at particular risk for obesity at the same time they are at risk for food insecurity, defined as limited or uncertain access to nutritious food. Food insecurity can have grave consequences including poor dietary intake and nutritional status, poor health, increased risk for the development of chronic diseases, and devastating effects on cognitive and social development and academic achievement.[cliii] Children from low-income households also suffer disproportionately from health consequences stemming from poor nutrition. Recent research has shown an association between obesity, iron deficiency and food insecurity in children and adolescents in low-income households.[cliv] Food security means that all people have access at all times to enough food for an active, healthy life.
- **Infrastructure, policy and housing contribute to overweight and obesity in Sonoma County.** There is growing evidence that what people eat and the likelihood of being overweight is influenced by the environment where they live.[clv] For example, the number of parks in South Santa Rosa is a third the number of parks north of Highway 12, creating a socioeconomic divide of recreation opportunities. A 2006 Rand Corporation study of public park use and physical activity found that people who live within one mile of a park are four times more likely to visit the park once or more per week and have an average of 38% more exercise sessions per week than those living farther way[clvi]. Sonoma County has among the highest costs of living, predominantly in terms of housing, in the country: the December 2009 cost of living index for Sonoma County was 160.2, compared to the US average of 100, considered a very high cost.[clvii] The cost of living was 60 percent higher in the county than the US average. Families that pay a higher percentage of their income for housing may not have the same healthy food options as people with higher incomes. The recent Communities of Excellence Report (CX^3 2009) report studied four low-income neighborhoods in the county: Boyes Hot Springs, Payran Neighborhood in Petaluma, Roseland in southwest Santa Rosa, and South Park/Kawana Springs neighborhood in southeast Santa Rosa. The report showed that

these four neighborhoods have a total of five supermarkets or large grocery stores (one had none), although none of them had reasonable public transportation. The neighborhoods do not have public transportation conducive to healthy food shopping, with bus lines near grocery stores that run regularly. The neighborhood stores do not meet standards of healthy marketing within the stores. Most of their stores sell fruits and vegetables priced 10% higher than the county average. Only three of the supermarkets, grocery stores, and corner stores in the four neighborhoods accept WIC vouchers while all four neighborhoods have over 50% of the population living in poverty. Most (85%) of the neighborhoods' fast food restaurants failed to offer healthy alternatives to their typical menu. Only one of the four neighborhoods hosts a farmer's market.[clviii] Combining this with the few parks, limited access to playing fields and other means to exercise safely, these neighborhoods are faced with poor food options and limited activity opportunities and the environment might help to explain the higher rate of obesity among low-income children.

- **Schools must be part of the solution to solving overweight and obesity.** Schools, preschools and after-school programs play a unique and critical role in shaping children's eating and activity behaviors. In schools, children learn significant and lasting lessons about nutrition and physical activity, both from the curriculum and physical education programs and from the examples of their teachers and peers. The influence of schools cannot be overstated. And yet, schools face competing priorities. Meeting strict academic requirements imposed by the 'No Child Left Behind Act' is today's top priority for school district superintendents. Research suggests that students' health and learning are inextricably linked. However, many school leaders are challenged by other pressing priorities, such as: budget constraints, raising academic outcomes, closing achievement gaps, hiring and retaining quality staff, and insuring school safety. Often the schools in low-income areas are in program improvement status that does not allow time for nutrition education, and pressures schools to reduce or eliminate physical education and recess in order to have more academic time.

Key Indicators to Track Progress

Indicator
The percentage of mothers who breastfeed their babies for 6 months.
The percentage of children in Sonoma County who eat five servings of fruits and vegetables daily.
The percentage of students ages 6-18 who consumed fast food at least one time in the past week.
The percentage of students who participate in moderate or vigorous physical activity for at least 20 minutes, three or more days per week.
Percentage of 7th graders that achieve the Healthy Fitness Zone for all 6 areas of the annual California Physical Fitness test.
Proportion of adolescents and children who walked, biked, or skated to or from school in the past week.

Accomplishments and Progress Made Since 2008

Accomplishments and progress toward addressing this critical health issue are increasing. The community, both English and Spanish speakers, has engaged in a wide range of community activities, from education to walking groups to conducting food audits to working with schools on menus and policies. Because nutrition and physical activity are target areas of Health Action, several of its initiatives focus here: iGROW, iWALK, Safe Routes to School, School Wellness, Healthy Schools Initiative and Food System Alliances. Taking up the mandate for creating and implementing School Wellness Policies embedded in the 2004 Child Nutrition and WIC Reauthorization Act, schools and their surrounding communities are coming together as schools become sites for community gardens, and schools offer community education. Many of the community health centers have begun to measure and track Body Mass Index (BMI) on their patients and provide more patient and community education. Community leadership have united in the Community Activity & Nutrition Coalition (CAN-C), the Healthy by Design Committee and Healthy Eating, Active Living (HEAL), to combine the expertise, experience and resources of a diverse public and private organizational

Advocacy has made important inroads: some small neighborhood markets now have fresh fruits and vegetables for sale as healthy food options; parents advocated successfully for the Mobile Food Vendor Ordinance passed by Sonoma County limiting food carts to 500 feet away from schools and parks.

Current Service System Resources, Gaps and Opportunities

> ***"We need to return to the days when our public schools were special places, commercial-free zones that fed our children nutritious food, and saw to it that recess and physical education were a part of every school day. Schools should be a sanctuary, not just another marketplace hawking junk food and sugary sodas."***
> - U.S. Senator Tom Harkin, (D) Iowa

Resources

Community Activity and Nutrition Coalition. In 1998, Sonoma County formed the Family Activity and Nutrition Task Force (FANTF) to address child overweight. Renamed in 2005, the Community Activity and Nutrition Coalition's (CAN-C) mission is to promote optimal health for the general population with a focus on nutrition and physical activity, and to promote access to treatment for children who have nutritional needs. In January 2006, CAN-C was one of three collaboratives awarded a Kaiser Permanente Healthy Eating Active Living (HEAL) grant. This grant provides funding to effect changes in social and physical environments, and public policy and organizational practices, to increase access to affordable, healthy food and increase opportunities for physical activity in South East and South West Santa Rosa. Residents and other stakeholders in the community are guiding the initiative. A few examples of HEAL accomplishments include the establishment of routine BMI screening in four clinics serving 12,000 children in south Santa Rosa; community education led by health education and outreach workers (promotores de salud); two small neighborhood markets are now stocking fresh fruits and vegetables and have reduced their inventory of junk food, and new community groups promoting exercise and nutrition have sprung up.

Health Action. Health Action is a partnership of community leaders, organizations and individuals committed to improving the health of all Sonoma County residents. Most of its initiatives provide opportunities for health improvement in the area of youth obesity. iWALK, iGROW, Safe Routes to School, FSA and Healthy Schools all contribute to individual and community efforts.

A Healthy Students Initiative (HSI) planning group was convened in August 2009 as a subcommittee of CAN-C. In January 2010, the HSI conducted a survey of school districts, principals, and food service directors to ascertain readiness to implement healthy eating/physical activity policies and projects and to identify potential school partners to pilot the HSI in Sonoma County. In collaboration with St. Joseph Health System, two charter schools in Sonoma Valley were selected to begin a Healthy Students Initiative pilot based on the Healthy 4 Life program developed by St. Joseph Health System and successfully implemented in Orange County to increase healthy eating and physical activity among school students.

Body Mass Index (BMI) screenings and counseling. Community health centers in Sonoma County are routinely assessing and monitoring of children's nutrition and weight. They are institutionalizing BMI screening as a vital sign at routine medical visits. They are providing staff training on effective communication and interventions to sensitively counsel patients who are at risk for or are overweight. Kaiser Permanente offers an online tutorial for working with children and their families on the subject of pediatric weight management, www.kphealtheducation.org.

California Power Play! Campaign. Power Play is a statewide social marketing initiative, which uses a multi-channel, community-based approach to encourage 9 to 11 year olds from low-income households to eat at least 5 servings of fruits and vegetables and to participate in at least 60 minutes of activity every day. The campaign promotes its message in schools, after-school programs, media, farmers' markets, restaurants, and grocery stores. Sonoma County coordinates the North Coast Regional campaign, which reaches over 5,000 children each year.

Women Infants and Children (WIC) Program. WIC is a nutritional program that provides pregnant women, new mothers and young children up to age 5 with food vouchers and nutritional counseling about eating well and staying healthy. Sonoma County has four WIC programs (Santa Rosa, Petaluma, Sonoma and Guerneville), serving more than 8,000 low-income mothers, infants and children.

The Sonoma County Breastfeeding Coalition. Sonoma County's Breastfeeding Coalition was formed in 1996, with a mission to educate and empower women to breastfeed; to encourage breastfeeding-friendly attitudes, policies, and images in the community; to promote unity among breastfeeding professionals and advocates; and to increase public awareness of the value of breastfeeding. The coalition includes representatives from the hospitals, community health centers, private physician offices, WIC and the County Health Department.

International Walk to School Week takes place around the world the first week in October to raise awareness about the ways walking and biking to school helps children and communities. The goal is to encourage more adults and children to walk (and roll) to school together to raise awareness about the importance of teaching children safe walking behaviors, such as how to cross streets, and how to select safe routes to school; how easy and enjoyable walking is; and taking specific steps to create more walkable communities such as advocating for more crosswalks, sidewalks, crossing guards and better driver behavior.

Gaps

> ***"Many people have begun to draw analogies between preventing obesity and smoking cessation. Clearly, both are broad public health problems that require an integrated medical and public health approach. But obesity has its own unique set of issues. The sooner we begin to define those issues and start effectively helping people achieve a healthy body weight, the better."*** - George Isham, MD, Medical Director/Chief Health Officer, HealthPartners, Minnesota

Many obstacles impede the prevention and management of childhood overweight and obesity. Approaches limited to medical settings will not be effective without reinforcing strategies in schools, communities and at home. Collaboration among community leaders and government, health care providers, schools, and families is critical to helping families and children adopt and maintain healthier lifestyles. School and community programs must continue to address the availability of junk food, make school meals more nutritious, address sedentary behaviors and increase daily exercise. This is a major focus of the work of Health Action, in most of its separate, but interlinked activities.

Limited health insurance coverage. Treatment for overweight and obesity still remain an 'excluded benefit' for many insured patients, although that may change with Health Care Reform, which guarantees screening and intensive behavioral counseling for these conditions.[clix] Most insurance carriers do not reimburse medical providers for incorporating universal screening and nutrition and physical activity education into regular preventive health care visits. Most interventions that are covered under insurance are at the obesity end of the spectrum, such as surgical interventions for the morbidly obese. Improved treatment will depend on the development of interventions that can be applied effectively and efficiently in primary care settings and must include appropriate reimbursement for the care that is given. Medi-Cal and Healthy Families are now supposed to cover prevention, assessment and care provision for overweight and obese children.[clx] The recently enacted Affordable Care Act also requires each state to design a public awareness campaign on preventive and obesity related services available to Medicaid beneficiaries. Starting in 2010, the Act also requires new private plans to cover preventive services at no charge by exempting these benefits from deductibles and other cost-sharing requirements.[clxi]

Inconsistent support to ensure successful breastfeeding. There is a lack of consistent and accurate knowledge about breastfeeding among health care professionals and the general

population. Hospital feeding schedules, lack of 'rooming-in' facilities, early discharge of mothers and babies without time to establish breastfeeding, and discharging mothers with formula packets and advertising can all interfere with establishing exclusive and sustained breastfeeding in the immediate postpartum period. Lack of a support network during the critical postpartum period frequently leads mothers to abandon their plan to breastfeed. Due to the high cost of living in Sonoma County, mothers are forced to return to work soon after giving birth. Though providing workplace support for breastfeeding in the workplace is State law, many workplaces do not provide it. Additionally, mothers with low-paying jobs are often fearful of retribution for asking for enforcement of the law. County data show good initiation of breastfeeding (95% of Sonoma County mothers initiated breastfeeding in the hospital in 2006)[clxii] but by six months, 64% had stopped, compared to 48% statewide, in the 2005/2007 CHIS data.[clxiii]

Data gathering on child overweight, obesity and physical fitness is in peril. The federal Safe and Drug Free School funding that allocated money to all districts was re-routed by Congress and now goes entirely to competitive grants. As a result, both the funding and the mandate for schools to administer the California Healthy Kids Survey ended this year. Therefore, it is unclear at this time how many Sonoma County school districts will continue conducting the survey without funding and without a mandate. Stakeholders are gathering at the time of this writing to determine whether to apply for the competitive grant as well as other ways to continue the implementation of CHKS in Sonoma County.

Opportunities

School Wellness Policy. Schools are situated to be part of the solution to solving overweight and obesity. The White House Task Force on Childhood Obesity's report to the President, "Solving the Problem of Childhood Obesity in a Generation" (2010) identifies changing the school environment as a key strategy to address the national health crisis. In recognizing the critical role of schools in promoting student health, the U.S. Congress passed legislation requiring all school districts with federally funded school meals programs to develop and implement wellness policies that address nutrition and physical activity by the start of the 2006-2007 school year. The legislation places the responsibility of developing a wellness policy at the local level and requires active involvement of parents and students in designing the district policies. According to the requirements for the local wellness policy, school districts set goals for nutrition education, levels of physical activity, nutritional quality of food provision, fund raising and other school-based activities that promote student wellness.

- All 40 Sonoma County school districts are in compliance with this law, with Board-approved School Wellness policies.
- Health Action formed a School Wellness Project Design Team that recommended the Healthy Student Initiative as one of Health Action's first projects. The Initiative recognizes that a coordinated and collaborative approach by schools, communities, counties, cities and the State is necessary to make a difference.
- Sonoma County is working closely with the California School Boards Association (CSBA), to increase collaboration and engagement. Sonoma County has a direct link to CSBA, as current Santa Rosa City Schools Board member, Frank Pugh, is Past President of CSBA and is a strong advocate of its "Building Healthy Communities" project.
- The new website on School Nutrition and Fitness (www.schoolnutritionandfitness.com) is an important resource for the county.
- The passage of the Healthy, Hunger-Free Kids Act of 2010 (S. 3307) offers the promise of improved access to nutritious food for low-income and all children in schools and after schools,

by enhancing the eligibility process, increasing reimbursement for providers for the first time in 30 years, enhancing farm-to-school networks, and establishing nutrition standards for all foods sold in schools for the first time.

A report from the U.S. Surgeon General on physical activity and health describes school-based interventions for youth as particularly promising, not only for their potential scope—almost all young people between the ages of 6 and 16 years attend school—but also for their potential impact.[clxiv] Nearly half of young people 12-21 years of age are not vigorously active; moreover, physical activity sharply declines during adolescence. Childhood and adolescence may thus be pivotal times for preventing sedentary behavior among adults by maintaining the habit of physical activity throughout the school years. School-based interventions have been shown to be successful in increasing physical activity levels. With evidence that success in this arena is possible, every effort should be made to encourage schools to require daily physical education in each grade and to promote physical activities that can be enjoyed throughout life.

What Will It Take to Make Progress on Children's Nutrition, Obesity and Physical Activity?

Spectrum of Prevention

The suggested activities at each level of the Spectrum of Prevention are opportunities for improving the health of Sonoma County's children.

Strategies	*Activities*	*Resources and innovations*
Influencing policy and legislation	• Support the effort of local planning departments to develop and utilize planning tools to support a built environment that promotes healthy eating and active living. • Develop or re-evaluate long-term transportation plans that include active transportation goals such as walking or biking. • Advocate for zoning or land use rules that prevent new fast food restaurants within a half-mile of schools. • Advocate for state and federal government to fund physical education, better food, and safe drinking water in schools. • Advocate for health insurance to cover nutrition and physical activity counseling. • Advocate for the food industry to serve reasonable portion sizes.	• Healthy By Design • Health Action • Healthy Sonoma.org • Countywide Safe Routes to School • School Wellness Policy
Mobilizing neighborhoods and communities	• Organize communities to advocate for community projects/development to increase parks and park programming,	• Healthy Eating, Active Living Community Health Initiative (HEAL) • Health Action – iGROW

Strategies	*Activities*	*Resources and innovations*
	trails, and bike lanes to schools. • Establish joint-use agreements enabling students and community members to use school facilities after school hours. • Organize communities to advocate for greater availability of fresh foods and reduction of fast food outlets. • Support a sustainable local food system where local growers are economically viable, the physical environment is unpolluted, and consumers have access to healthy food.	• Health Action – Healthy Students Initiative • Health Action – iWALK • International Walk to School Week • Grupo Activo (South Santa Rosa) • Network for a Healthy California – North Coast Region – Power Play! • Network for a Healthy California – North Coast Region – Retail Program
Changing organizational practices	• Standards for an adequate history of a patient should include lifestyle characteristics in particular diet, stressors, smoking and alcohol and regular amount, frequency and type of exercise. • Ensure daily quality physical education for all children in grades K-12. • Encourage culturally appropriate and sensitive patient education about the importance of healthy weight to long-term health. • Continue to improve hospital and worksite practices that promote and support breastfeeding. • Encourage clinics/health centers to provide reimbursable classes in lactation support. • Discontinue marketing unhealthy food to young children. • Support small farms and farm-to-cafeteria opportunities through procurement policies that favor local, healthy foods. • Encourage schools to hold healthy fundraisers such as walk-a-thons. Encourage healthy classroom rewards and healthy food at parties.	• Health Action – iWALK • Health Action – iGROW • Healthy Eating, Active Living Community Health Initiative (HEAL) • Redwood Community Health Coalition (RCHC) • The Sonoma County Breastfeeding Coalition • Grupo Activo (South Santa Rosa)

Strategies	*Activities*	*Resources and innovations*
Fostering coalitions and networks	• Encourage schools to actively implement their school wellness policy. Launch and maintain a school health council, comprised of school and community members who help guide and develop district goals and programs on wellness. • Promote networking of organizations working to reduce food insecurity. • Provide culturally appropriate education about nutrition and physical activity in schools. • Promote integration of health education into other subjects. • Decline offers from food and beverage marketers to donate equipment or sponsor before and after-school programs. • Implement school policies to limit advertising of unhealthy products on or near schools. • Promote active and safe walking and biking routes to school.	• School Wellness Policy • Health Action -- Healthy Students Initiative • The Countywide Safe Routes to School (SRTS) Workgroup • Salmon Creek School Lunch Transformation (Salmon Creek Occidental/Freestone) • Support Healthy Active Kids in Education (SHAKE) • Safe Kids Sonoma County
Educating providers	• Promote Body Mass Index (BMI) measurement as a clinical vital sign. • Support comprehensive nutrition and physical education/activity programs in preschools, schools and communities. • Train promotores to educate families about healthy eating and physical activities. • Encourage providers and health centers to train their staff on lactation support.	• Redwood Community Health Coalition (RCHC) • Community Activity and Nutrition-Coalition (CAN-C) • The Sonoma County Breastfeeding Coalition • The Sonoma County Food System Alliance (FSA) • The School Garden Network
Promoting community education	• Assist health professionals to better promote an understanding of overweight and health-related problems, and the importance of physical activity and healthy eating practices to good health. • Promote family participation in	• Redwood Community Health Coalition (RCHC) • Healthy Eating, Active Living Community Health Initiative (HEAL) • The Sonoma County Breastfeeding Coalition

Strategies	*Activities*	*Resources and innovations*
	well-baby checkups as important strategies to address cultural norms that support unhealthy eating patterns. • Create edible school gardens, incorporating curriculum, instruction, and cooking into the program.	
Strengthening individual knowledge and skills	• Promote healthier food choices, including at least 5 servings of fruits and vegetables each day, and reasonable portion sizes at home, in schools, and in the community. • Help families and individuals to develop the skills for effective weight management. • Implement media campaigns that promote healthy eating and physical activity. • Provide education about Safe Routes to School. • Promote American Academy of Pediatrics' recommendation to limit children's total daily media time to no more than one to two hours of quality programming.	• Kaiser Permanente online tutorial • Women Infants and Children (WIC) program • Raising Healthy Active Kids • Network for a Healthy California – California Power Play! Campaign • Sonoma County Regional Parks – Healthy Earth Healthy Bodies • Megan Furth Harvest Pantry • Countywide Safe Routes to School

Youth Alcohol, Tobacco, and Other Drug Use

> ***"Underage alcohol use is everybody's problem—and its solution is everybody's responsibility."*** - Kenneth P. Moritsugu, M.D., M.P.H., Surgeon General[clxv]

Alcohol, tobacco and other drug (ATOD) use among Sonoma County teens is a major public health issue. The dangers of alcohol and other drug use are extensive, pervasive and lasting for teens and yet the social pressures to drink and use other drugs are enormous. The media make it seem sexy, TV and magazine advertising promotes alcohol and tobacco products and other teens make it seem "cool." Many factors affect a young person's decisions about drinking, smoking and other drug use: their community including family, friends, and school; a propensity for risk taking; and stress. Factors such as permissive attitudes, adult behaviors, and easy availability from commercial and social sources also play a huge role in contributing to underage drinking and drug use.

For many years, Sonoma County teens have exhibited high rates of alcohol use and high-risk behaviors. The Healthy People 2010 national health target for teens reporting no alcohol or drug use in the last 30 days is 89%. Increasing the percentage of children and youth who reach

adulthood without using alcohol, tobacco or other drugs is an important national and local health goal. Environmental prevention and policy changes that support healthy, safe behaviors are key to reaching that goal. Strengthening the skills needed to reject all substances is another critical component of prevention because these skills and attitudes can carry on into adulthood, long after family constraints and other influences have lost their effectiveness.

The county continues to face teen health problems arising from alcohol, tobacco and other drug abuse that require aggressive and vigilant prevention efforts. Some of the best prevention approaches work on multiple levels, combining interventions that influence individual behavior and attitudes with interventions that change environments by controlling the availability of harmful substances. Many communities have enacted ordinances to increase awareness and accountability around availability and access of alcohol and tobacco and have increased enforcement of these laws. Yet the significant budget reductions in social and health services at the state and federal level create challenges to a local response. We have the knowledge to make prevention work and a large window of opportunity for improvement on this critical community health and safety issue.

Youth Alcohol, Tobacco and other Drug Use Defined

Drug dependence is "a state in which the individual has a need for repeated doses of the drug to feel good or to avoid feeling bad."[clxvi] Drug abuse is defined as "persistent or sporadic excessive drug use inconsistent with or unrelated to acceptable medical practice."[clxvii]
Adolescence is a time of adventure, risk taking and new challenges. Underage drinking and experimentation with and use of alcohol, cigarettes, household chemicals (inhalants), prescription and nonprescription medications, and illegal drugs (most commonly marijuana) are a risk for which teenagers may be unprepared. They may not anticipate just how these substances affect their behavior and their bodies.

The Story Behind the Problem

> ***"Too many Americans consider underage drinking a rite of passage to adulthood."***
> *- Rear Admiral Kenneth Moritsugu, MD, Acting* Surgeon *General*

National research and local data have identified community factors that contribute to underage drinking and illegal drug use: easy availability of alcohol from both commercial and social sources; permissive attitudes, behaviors, and community norms; weak law enforcement and inconsistent merchant compliance with underage drinking laws; and exposure to alcohol advertisements and promotion. Alcohol, tobacco and other drugs tend to loosen inhibitions and alleviate social anxiety, increasing their appeal for teenagers. Teens are often risk-takers, and they may take drugs or drink because it seems exciting. Some teens experiment with drugs or alcohol only a few times, but experimentation can become substance abuse and lead to serious problems.

Community norms. The social norms of a community play a significant role in the acceptability of underage and high-risk consumption of alcohol and other drugs. Community sponsored events and activities where alcohol is promoted and readily available contribute to social norms that support broad use across the population and may influence youth behaviors by encouraging experimentation and underage use. Adolescents respond to adult messages and are more apt to use substances within the context of permissive attitudes and community norms. Similarly, permissive norms related to marijuana and other drug use creates a high-risk environment for Sonoma County teens.

Family influences. Factors such as family history of substance abuse, parental drug use, and favorable attitudes towards underage use contribute to increased risk for alcohol and substance abuse. Teens at great risk for developing serious alcohol or drug problems include those whose family members have problems with substance abuse. A national survey found that parents underestimated the importance of alcohol, tobacco, and other drugs in the lives of teenagers. Twenty-eight percent of teens reported that alcohol and other drugs are the number one problem facing people their age, compared to only 17% of parents who thought this.[clxviii]

Individual and peer factors. Many factors may influence a person's initial alcohol use, though numerous studies show that peer influence—both active and passive—is the single greatest contributor to teen drinking.[clxix] Teens may use alcohol to relax, have fun, be part of a group, out of curiosity, and to escape. Contributing factors may also include academic failure, school-related problem behaviors, peer rejection, favorable attitudes toward drug use, and early initiation of drug use.[clxx]

Alcohol and tobacco advertising and promotion. Advertising content often glamorizes drinking and reinforces the idea that alcohol is intrinsic to social interaction. Recent studies conclude that exposure to alcohol advertising contributes to an increase in underage drinking;[clxxi] 7th graders who viewed more television programs containing alcohol commercials were more likely to drink in the 8th grade;[clxxii] and exposure to and positive attitudes towards alcohol advertisements affect youth decisions about alcohol use.[clxxiii]

The positive imagery of smoking in movies and advertisements also contributes to encouraging tobacco use as well as the perception by some that the problem of smoking has been solved.[clxxiv] The onset of tobacco use occurs primarily in early adolescence. Very few people begin to use tobacco as adults; almost all-first use has occurred by the time people graduate from high school. The earlier young people begin using tobacco, the more heavily they are likely to use it as adults, and the longer potential time they have to be users.[clxxv]

Access to alcohol. Alcohol use by adolescents and teens is frequently made possible by adults who furnish, sell, or otherwise allow underage youth to access alcohol. Underage drinking is the use of alcohol by a person under the age of 21, the minimum legal drinking age. Minors cannot legally obtain alcohol. The availability of alcohol and the means by which young people access it are critical factors in determining the extent to which high risk drinking occurs.

The Consequences of Youth Alcohol, Tobacco and Other Drug Use

> ***"The adolescent brain is a 'work in progress.' Alcohol, however, can disrupt the adolescent brain's ability to learn life skills."*** - Peter M. Monti, Professor of Medical Sciences and Director of the Center for Alcohol and Addiction Studies, Brown University

The consequences of the use of alcohol, tobacco and other drugs extend far beyond the individual and are not restricted simply to the lives of people who might be labeled alcoholics or addicts. Despite efforts to prevent underage drinking, alcohol, tobacco and other drug use remains a pervasive problem among youth in Sonoma County. Prosecutors are noting an increase in the number of cases they prosecute for OxyContin, an opiate-based painkiller that has joined marijuana and methamphetamine as drugs battled most by Santa Rosa and other Sonoma County law enforcement agencies.[clxxvi]

ATOD use impacts communities. High rates of alcohol use and associated risky behaviors by teens have negative consequences for themselves and their communities. The pervasiveness of

teenage alcohol misuse is particularly worrisome given the association of teen drinking with injuries due to car crashes, vandalism, property damage, violent behavior, sexual assaults, and emotional problems. These problems create significant trauma for youth and families and drain public resources through increased calls for police service, emergency medical services, health care costs, criminal justice costs, substance abuse treatment, mental health care services and use of other community services.[clxxvii]

ATOD use affects the growing adolescent brain. The brain goes through dynamic change during adolescence, and alcohol and other drug use can seriously damage long- and short-term growth processes. Young brains are built to acquire new memories and are "built to learn."[clxxviii] For teens, given the consequences on their developing brain, there is no such thing as 'risk free' experimentation. The brain does not finish developing until the mid 20s. One of the last regions to mature is intimately involved with the ability to plan and make complex judgments.[clxxix] Recent scientific studies suggest that alcohol has several effects on the brain function of children and adolescents, including: different toxic effects for adolescents than those for adults; impairment of brain function and memory; 10% reduction in the brain's center of learning and memory; short-term or relatively moderate drinking impairs learning more in youth than in adults; poor visual-spatial functioning; poorer retention and retrieval of verbal and nonverbal information; long-lasting changes in the brain; and reduction of students' academic performance.[clxxx]

ATOD use impacts health. The earlier teens start drinking and using drugs, the greater the harm and the health risks. Alcohol and substance use is associated with increased risk for chronic disease, unsafe health behaviors such as high-risk sexual practices, unintentional injury, mental health problems, and poor oral health. Active smoking by young people is associated with health problems during childhood and adolescence and with increased risk factors for health problems in adulthood. Cigarette smoking during adolescence appears to reduce the rate of lung growth and the level of maximum lung function that can be achieved, with young smokers less likely to be physically fit than young nonsmokers.[clxxxi]

ATOD use impacts the future. For teens, their prospects for future success are diminished with the many problems associated with adolescent substance abuse, including absenteeism from school, academic difficulties, poor peer relationships, impact on self-esteem, poor judgment, problems at home, and lasting medical and legal consequences. Young people who start drinking before they are 15-years old are five times more likely to have alcohol-related problems later in life.[clxxxii]

Underage drinking has high costs. Underage drinking is estimated to cost the nation about $68 billion each year in deaths, injuries, property damage and related economic and productivity losses.[clxxxiii] Underage drinking cost the citizens of California $8.1 billion in 2007, or $2,112 per teen.[clxxxiv] California ranks 31st highest among the 50 states for the cost per youth of underage drinking.[clxxxv] Excluding pain and suffering from these costs, the direct costs of underage drinking incurred through medical care and loss of work cost California $2.8 billion each year.[clxxxvi]

Key Findings on Youth Alcohol, Tobacco & Other Drug Use in Sonoma County

- **Community norms and availability affect alcohol use in Sonoma County.** The majority of Sonoma County high school students in the 2007-09 CHKS Survey (86% of 11th graders, up from 83% two years before), report that it is "very easy" or "fairly easy" to obtain alcohol.[clxxxvii] Private parties are one of the most frequently reported avenues for access to alcohol either provided directly by parents, older siblings, or older friends. Drinking games are reported to be a common feature of private parties, encouraging over-consumption of alcohol.[clxxxviii] The lack of consistent compliance with standards and policies regarding retail

alcohol sales and access to alcohol at public events contribute to higher rates of consumption. Statistics from 2001 to 2006 show that the majority of disciplinary actions filed against stores, bars and restaurants in Sonoma County were related to either selling alcohol to minors, employing a minor or allowing minors on the premises.[clxxxix]

- **Alcohol is the leading drug used by Sonoma County youth.** Alcohol use among youth continues as a significant challenge in Sonoma County, though California Healthy Kids Survey (CHKS) data reports improvement between 2006 and 2009. In 2006, 33% of Sonoma County (SC) 9th graders and 50% of SC 11th graders reported using alcohol in the past 30 days, compared to 28% and 44% respectively in 2009. At the same time, Sonoma County's 7th graders have a slightly lower rate than their peers statewide, while 9th graders are very close to their peers and 11th graders continue to have a higher rate than their peers in the state as a whole (36%).[cxc] (See to Table 5 and Table 6)
- **Sonoma County students of alternative schools show significantly higher rates of alcohol, other drug and tobacco use then peers in comprehensive schools.** Alternative schools are generally for youth with multiple risk factors in need of specific services. The difference in use reported by alternative school students in Sonoma County compared to their peers is alarming. In 2007-09, 65% of alternative school students report drinking alcohol in the past 30 days, compared to 28% in 9th grade and 44% in 11th grade; 55% of alternative school students report smoking marijuana, compared to 16% in 9th grade and 25% in 11th grade; and 50% of alternative school students report using tobacco compared to 11% in 9th grade and 16% in 11th grade.[cxci] These findings indicate that students in alternative school settings may need intensified intervention and support for cessation. (See Table 5 and Table 6)
- **More young people reported using marijuana than tobacco in the past 30 days.** In Sonoma County in 2009, more youth reported they had smoked marijuana than tobacco in the past 30 days.[cxcii] It is noteworthy that Sonoma County's youth in 2007-09, except for 11th graders and students in alternative education programs, smoke marijuana in smaller numbers than their peers statewide.[cxciii] (See Table 5 and Table 6)
- **Tobacco use increases with age.** Survey results show that Sonoma County students are using tobacco at similar or higher rates than their peers throughout California. Experimentation with tobacco rises sharply as Sonoma County students move through middle and senior high school: in 2006 and 2007-09, daily tobacco between the seventh and ninth grades almost tripled and rose again in 11th grade.
- **Methamphetamine is a serious problem for some Sonoma County youth.** Methamphetamine is a highly addictive drug and can be a problem even with nominal use. In 2005-06, 2% of Sonoma County 9th graders and 3% of 11th graders reported having used methamphetamine one or more times in the past thirty days, while in 2007-09, 3% of 9th graders and 3% of 11th graders reported using methamphetamines. Ten percent (10%) of students in alternative high schools (i.e., court and continuation schools) reported current use of methamphetamine in 2005-06 and 6% in 2007-09.[cxciv] (See Table 5 and Table 6 below)

Table 5. Alcohol, Tobacco and Other Drug Use 2005-06

Table 5.	**Comprehensive Schools**						**Alt. Schools**	
% of students who report using…	*Grade - County*			*Grade - State*			*County*	*State*
	7th	*9th*	*11th*	*7th*	*9th*	*11th*		
Alcohol (whole drink) in past 30 days	13%	33%	50%	13%	28%	37%	65%	55%

Table 5.	Comprehensive Schools						Alt. Schools	
Marijuana in the past 30 days	4%	16%	29%	4%	12%	16%	57%	42%
Tobacco in the past 30 days	3%	11%	19%	4%	5%	14%	48%	38%
Methamphetamine in the past 30 days	n/a	2%	3%	n/a	2%	2%	10%	10%
Source: 2005-06 California Healthy Kids Survey								

Table 6. Alcohol, Tobacco and Other Drug Use 2007-09

Table 6.	Comprehensive Schools						Alt. Schools	
% of students who report using…	Grade - County			Grade - State			County	State
	7th	9th	11th	7th	9th	11th		
Alcohol (whole drink) in past 30 days	13%	28%	44%	15%	27%	33%	65%	56%
Marijuana in the past 30 days	4%	16%	25%	6%	13%	19%	55%	45%
Tobacco in the past 30 days	3%	11%	16%	5%	9%	13%	50%	39%
Methamphetamine in the past 30 days	n/a	3%	3%	n/a	3%	3%	6%	9%
Source: 2007-09 California Healthy Kids Survey								

- **Sonoma County teens continue to have high rates of binge drinking.** Of particular concern are the high-risk behaviors, such as binge drinking, drinking and driving, polydrug use and unprotected sex that can occur in association with teen alcohol use. In addition to intoxication, binge drinking can result in alcohol poisoning which can cause difficulty breathing, unconsciousness and even death. Though the rates remain high, some improvement has been seen (see Tables 7 and 8). In 2009, Sonoma County students no longer exceed statewide averages in all areas of high-risk behavior. For example, fewer than half of all 11th graders (39%) (Down from 54%) and 56% (down from 77%) of alternative school students report getting very drunk or sick from alcohol, as compared to 41% and 65% of their state peers respectively. The same holds true for being high on drugs. However, 11th graders and alternative school students exceed the state average for both binge drinking and binge drinking more than three or more times in the past 30 days (26% in Sonoma County compared to 22% statewide for any binge drinking, and 17% in Sonoma County compared to 11% statewide for more than three times). While the rates are coming down, significant work still remains to convince youth to avoid risky behaviors.

Table 7. High Risk Behaviors 2005-06

Table 7.	Comprehensive Schools						Alt. Schools	
% of students who report using…	Grade - County			Grade - State			County	State
	7th	9th	11th	7th	9th	11th		
Being very drunk or sick from drinking	8%	30%	54%	9%	25%	41%	77%	64%
Being high on drugs	7%	25%	46%	8%	20%	31%	76%	66%

Table 7.	Comprehensive Schools						Alt. Schools	
Binge drinking in the past 30 days	4%	19%	34%	4%	13%	21%	51%	39%
Binge drinking three or more times in the past 30 days	2%	8%	18%	2%	6%	10%	34%	24%
Drinking and driving (or riding in a car driven by someone who has been drinking)	44%	20%	35%	n/a	22%	30%	62%	48%
Source: 2005-06 California Healthy Kids Survey								

Table 8. High Risk Behaviors 2007-09

Table 8.	Comprehensive Schools						Alt. Schools	
% Students who report using…	*Grade - County*			*Grade - State*			*County*	*State*
	7th	*9th*	*11th*	*7th*	*9th*	*11th*		
Being very drunk or sick from drinking	8%	23%	39%	11%	26%	41%	56%	65%
Being high on drugs	5%	19%	31%	10%	22%	34%	50%	65%
Binge drinking in the past 30 days	4%	12%	26%	7%	15%	22%	48%	43%
Binge drinking three or more times in the past 30 days	2%	7%	17%	3%	7%	11%	38%	26%
Drinking and driving (or riding in a car driven by someone who has been drinking)	n/a	22%	28%	n/a	29%	30%	58%	48%
Source: 2007-09 California Healthy Kids Survey								

- **Motor vehicle crashes are the leading cause of death among teenagers. Alcohol use is a major contributor.** In 2008, 49% of traffic fatalities in Sonoma County were alcohol-related, while 13% of traffic injuries were alcohol-related.[cxcv] In 2007-09, 22% of Sonoma County 9th graders, 28% of 11th graders and 58% of alternative school students reported drinking and driving, or riding in a car driven by someone who had been drinking (this represents a decrease over the 2005-06 CHKS for 11th graders and alternative school students, but a 2% increase for 9th graders). Forty six percent (46%) of 7th graders reported being a passenger in a car driven by someone who had been drinking alcohol, an increase from 44% in 2005-06.[cxcvi]
- **Prescription drug abuse has been identified as a growing problem in Sonoma County.** The Sonoma County Prevention Partnership, a voluntary collaborative convened by the Sonoma County Department of Health Services, has identified the misuse or abuse of prescription drugs as an issue and has selected it for research to determine the extent of the problem in Sonoma County.[cxcvii]
- **Sonoma County needs more AOD treatment programs for youth.** As seen in Table 9 below, the number of youth admitted to AOD treatment programs in Sonoma County over the past three years has been decreasing, as state and local budgets shrink. Marijuana is the most common primary drug, followed by alcohol and methamphetamine.

The current system for AOD treatment in Sonoma County relies on two funding sources: the Minor Consent Drug Medi-Cal System, and the Adolescent Treatment Expansion Program. Minor Consent Medi-Cal is only available in Santa Rosa through DAAC. Congress member Woolsey obtained federal funding through 2012 for the Adolescent Treatment Expansion Program, which offers more services through the schools. The concern is about sustainability due to the ending of this funding in 2012. While outpatient services have improved there remains a great need for residential treatment beds for more seriously addicted youth.

Table 9. Treatment Admissions by Primary Drug of Choice <18, Sonoma County, 07-10

Year	*FY 2007-08*	*FY 2008-09*	*FY 2009-10*
Total Admissions	*627*	*619*	*550*
Marijuana	376	424	369
Alcohol	182	126	101
Methamphetamine	29	23	35
Source: Sonoma Web Infrastructure for Treatment Services (SWITS)			

Key Indicators to Track Progress

Alcohol, Tobacco and Other Drug Use

Health Indicators
The percentage of teens that have not used alcohol or drugs in the past 30 days.
The percentage of adolescents (age 12-17) who engaged in binge drinking in the past 30 days.
The percentage of adolescents who report that they ever drove after drinking alcohol (9th and 11th only)
The percentage of adolescents who perceive great risk associated with alcohol use of five or more drinks per week.
The percentage of adolescents who perceive great risk associated with marijuana use of 1-2 times per week.
The percentage of students ages 12-17 who are not current smokers.

Accomplishments and Progress Made Since 2008

Critical accomplishments since the last Needs Assessment center on the increase in youth-led education and advocacy efforts throughout the county, especially in Sonoma Valley, Roseland and Santa Rosa for both English and Spanish speaking youth. In addition, there has been a growth of prevention coalitions in various regions of the county (Petaluma, West County, Sonoma and Cotati-Rohnert Park, with a new group forming in Cloverdale) focused on enacting local ordinances that address the availability and access of alcohol, including Social Host Ordinances, Conditional Use Permits, and Deemed Approved Ordinances that hold alcohol establishments accountable for nuisance activity in and around their premises. The Drug Abuse Alternatives Center (DAAC) has provided enhanced training for and collaboration among professionals working in mental health and at the hospitals, while substance abuse has been integrated into the advocacy, education and promotional work of the Sonoma County Mental Health Coalition.

Since the 2008 Community Benefit Report, Health Action and Healthy Sonoma.org have begun to track three indicators relating to youth alcohol and drug use:

1. Teens who have used alcohol in the past 30 days.
2. Teens who do not use alcohol and other drugs.
3. Alcohol outlets. This indicator shows the number of beer, wine, and liquor stores per 100,000 population. Research suggests that availability of alcohol, as measured by density of alcohol outlets, is closely related to the level of crime, domestic violence, and sexual assault in a community. Areas with a higher density of alcohol outlets also tend to have higher rates of vehicular accidents and fatalities, underage drinking, and adult alcohol and drug use.

Current Service System Resources, Gaps and Opportunities

As the field of ATOD prevention evolves, efforts are increasingly focused on shifting policies and community and social norms as an effective way to reduce youth ATOD use. Environmental prevention strategies recognize and work to address the powerful influence that ready access and availability of alcohol combined with permissive attitudes toward ATOD has on youth. The challenge of addressing youth ATOD use as a countywide problem is to maintain the effective local efforts currently underway while building a more systematic and comprehensive countywide approach to youth ATOD use.

Resources

The Drug Abuse Alternatives Center (DAAC). DAAC is the largest provider of youth substance abuse prevention and treatment in Sonoma County. DAAC provides teen services including outpatient drug-free treatment and school-based services, outreach, education and prevention efforts, assessment, and individual, family, and group counseling. DAAC can provide no-cost services through the Minor Consent Drug Medi-Cal Program in Santa Rosa only. The Adolescent Treatment Expansion Program serves the outlying areas.

R House. R House is an innovative leader in the field of adolescent substance abuse treatment. It is the only certified residential alcohol and other drug treatment facility for youth (boys and girls ages 12-18) located in Santa Rosa, Sonoma County. The nine-to-twelve month residential program includes group therapy, individual counseling, a strong emphasis on family therapy, and planning for the transition to outpatient treatment.

Clean and Sober School Program. The Sonoma County Office of Education (SCOE) operates Clean and Sober School programs in Petaluma and Santa Rosa. The program provides safe and supportive environments for students in grades 9-12 who are struggling with recovery from drug and alcohol abuse. The program recognizes that students who have started rehabilitation often need to change their environment to be successful in overcoming substance abuse and that they benefit from an educational environment where all students are committed to being alcohol and drug free. This voluntary program serves approximately 50 students each year.

AOD Prevention Curriculum. This year, 2010/11 marks the first year of the elimination of all the Safe and Drug Free Schools (federal) and Tobacco Use Prevention Education (state) entitlement-funding to school districts. The elimination of the funding results in the elimination of the mandate to implement evidence-based prevention programs. Federal and state funding is available only through a limited number of highly competitive grant applications.

In past years, most districts were using an evidence-based prevention curriculum. At this time the Sonoma County Office of Education (SCOE) administers grants (federal and state) through which

six districts (14 high schools) use the evidence-based program Project SUCCESS. Petaluma School District is in the final year of a federal grant that implements the evidence-based curricula "Caring School Communities" at 7 elementary schools. Future funding for these efforts is uncertain.

The Safe Schools Unit of the Sonoma County Office of Education continues to provide leadership and support services to school districts in the areas of alcohol, drug, tobacco and violence prevention and collaborates with County agencies, community based agencies and groups such as the Coalition for a Tobacco Free Sonoma County and the Santa Rosa Gang Task Force.

Santa Rosa has dedicated significant Measure O gang activity prevention funds toward AOD prevention and early intervention programs. Other Sonoma County cities offer a range of educational and counseling programs through their recreation and police departments, including School Resource Officers, counseling, and participation in educational programs such as "Every 15 Minutes" and "Alive at 25."[cxcviii]

Tobacco Use Prevention Education (TUPE). The Safe Schools Unit of the Sonoma County Office of Education provides leadership and support services to school districts participating in and receiving Tobacco Use Prevention Education funds from the state and collaborates with The Coalition for a Tobacco Free Sonoma County to extend these efforts to the community.

Friday Night Live. Friday Night Live works to build partnerships for positive and healthy youth development that engages youth as active leaders and resources in their communities. Local Friday Night Live chapters implement youth-led environmental prevention strategies to reduce ATOD use and related problems in Sonoma County.

Student Assistance Program Collaborative (SAPC). SAPC works to ensure the development and coordination of a countywide prevention and early intervention system for adolescents at high schools in Sonoma County. Members include six school districts (Petaluma, Cotati-Rohnert Park, Windsor, Cloverdale, Healdsburg and West Sonoma County High School Districts), six community based organizations (Social Advocates for Youth, Petaluma People's Services, West County Community Services, the Drug Abuse Alternatives Center, the National Alliance on Mental Illness, and California Parenting Institute), the Sonoma County Office of Education and the Sonoma County Department of Health Services. The Collaborative was awarded a significant Mental Health Services Act (MHSA) award to support student assistance programs in Windsor and Cloverdale and help to sustain Project SUCCESS services in Cotati-Rohnert Park, Petaluma and West Sonoma County High Schools through June 2011. Any threat to continued MHSA funding beginning July 1, 2011 may have a negative impact on the potential for a countywide system.

Environmental Prevention and Planning Coalitions. Coalitions throughout Sonoma County are working to identify local priority problems related to high-risk drinking, marijuana and prescription drug use and to plan for evidence-based environmental strategies to address these problems. In South County, efforts include Petaluma, Sonoma Valley and collaboration among Sonoma State University, Rohnert Park and Cotati to identify priority issues related to high-risk drinking. In West County, the coalition is implementing community-based strategies aimed at preventing underage drinking. A new coalition in Cloverdale has initiated advocacy to pass a local Social Host Ordinance. The Sonoma County Prevention Partnership is addressing issues of underage and adult high risk drinking, as well as marijuana and prescription drug use in the unincorporated areas of the county. All coalitions are using research-proven strategies to help reduce youth access to alcohol and thereby reduce harm associated with underage alcohol consumption.

Gaps

Need for a coordinated, comprehensive and systemic approach to addressing youth alcohol, and other drug abuse. Currently, AOD using youth in Sonoma County may or may not find treatment programs that can help them improve their chances for a future free of addiction. County early intervention and support services are described as "fragmented and under-funded." While DAAC has the ability to provide services through Minor Consent Medi-Cal, there is neither a reliable identification and referral system in place nor are there sufficient treatment slots for youth. The public community schools (alternative schools) no longer offer a certified drug treatment program. R House and DAAC are the only treatment programs certified or licensed to treat youth. Further, teens without private resources have limited access to local residential treatment. Youth with private insurance have some options, but there are very few residential treatment beds available within the county. These conditions result in the current situation – where many youth continue to use AOD for years and simply fall through the cracks, never reaching a program that can offer them services and support.

Given the relatively small population of Sonoma County, creating a comprehensive system that seeks out AOD using youth and refers them to appropriate services would be the most effective means to have an impact on reducing youth AOD use. This would bring together local efforts, treatment programs and the schools and integrate them into a coordinated system for identification, referral and treatment of youth AOD users. The Student Assistance Program Collaborative (described above) is in the initial phases of developing such a system.

Expand and sustain the capacity of parents and communities to promote healthy development of youth. Efforts to address underage drinking, tobacco and substance use must include a focus on adults and the community at large. Most adults express concern about youth drinking and drug use and support public policy actions to reduce youth access to alcohol. Nonetheless, youth obtain alcohol from adults. Parents tend to dramatically underestimate underage drinking generally and their own children's drinking in particular.[cxcix] Parents must be collaborative partners in prevention efforts and in developing prevention messages.

Data gathering on teen alcohol and drug use is in peril. The Federal Safe and Drug Free School funding that allocated money to all districts for efforts such as implementation of the California Healthy Kids Survey (CHKS) was re-routed by Congress and now goes entirely to competitive grants. As discussed above, both the funding and the mandate for schools to administer the CHKS ended this year. Therefore, it is unclear at this time how many Sonoma County school districts will continue conducting the survey with no funds and no mandate.

Opportunities

Local coalitions to prevent underage and high-risk drinking are community groups working to prevent underage drinking and reduce problems associated with heavy drinking among young people 12 – 25 years of age. The Coalitions respond to this problem by implementing a variety of best practice and evidence-based strategies, including the Parent/Community Pledge (English or Spanish), facilitating passage of a Social Host Ordinance, and collaborating with local decision-making bodies and law enforcement to pass ordinances that address alcohol outlet density (Conditional Use Permits) with nuisance abatement standards (Deemed Approved Ordinances).

The Parent/Community Pledge is one part of a bigger effort to create a community-wide change in the way people think about teen drinking. Making the Pledge, coupled with a broader policy strategy that includes a Social Host Ordinance, will reduce the likelihood of teens having access to alcohol in homes. This ordinance holds the adult host(s) of teen parties accountable for hosting these parties and for the consequences resulting from underage drinking parties occurring on their

property. The ordinance levies civil and/or criminal penalties for adults who condone or allow underage drinking in their homes. Since 2007, Petaluma, Sebastopol and Sonoma have all implemented social host ordinances, and Cloverdale and the County are also moving in that direction. As increasing numbers of communities pass Social Host Ordinances, and community members join the Pledge campaign, youth binge drinking rates and the corresponding impact on teen health and social problems will decrease.

The Healthy Community Consortium (HC2). HC2 is the lead agency for the Petaluma Coalition to Prevent Alcohol, Tobacco and Other Drug Problems. HC2 was awarded a Drug Free Communities Support grant to substantially expand the community effort to prevent and reduce substance use among youth, to address the community issues that increate the risk of substance abuse and to promote the factors that minimize the risk of substance abuse.

Screening, Brief Intervention, Referral and Treatment. The federal Substance Abuse and Mental Health Services Administration (SAMHSA)[cc] Center for Substance Abuse Treatment (CSAT)[cci] has developed a brief intervention and referral tool to use with individuals who consume more than medically accepted limits of alcohol and other substances but are not yet dependent. Known as Screening, Brief Intervention, Referral, and Treatment (SBIRT), this intervention rejects the notion that only people with serious levels of abuse or dependency need targeted interventions. SBIRT assumes that everyone, regardless of current level of alcohol or drug consumption, can benefit from learning the facts about safe consumption and knowing how their own usage compares to accepted limits.

What Will It Take to Make Progress on Youth Alcohol, Tobacco and Other Drug Use?

Everyone in the community has a role to play in preventing the harm that results from alcohol, tobacco and other drugs misuse and abuse. Intervention approaches may fall into two distinct categories: (1) environmental-level interventions, which seek to reduce opportunities for underage drinking, and reduce community tolerance for alcohol, tobacco and other drug use by youth; and (2) individual-level interventions, which seek to change knowledge, attitudes, and skills so that youth are better able to resist the pro drinking and other drug influences and opportunities that surround them.

Spectrum of Prevention

The suggested activities at each level of the Spectrum of Prevention are opportunities for improving the health of Sonoma County's youth.

Strategies	*Activities*	*Resources and innovations*
Influencing policy and legislation	• Advocate for and support policies – including municipal ordinances – that restrict the availability, accessibility, affordability, placement, and promotion of alcohol.	• County Wide Planning - Planning for Community-Based Prevention of Alcohol and Other Drug-Related Problems in Sonoma County • California Healthy Kids Survey (CHKS) • National Youth Risk Behavior Surveillance Survey (YRBSS) • Measure O Gang Activity Prevention Funds • Social Host Ordinances/Conditional Use Permits and Deemed Approved

Strategies	*Activities*	*Resources and innovations*
		Ordinances
Mobilizing neighborhoods and communities	• Convene community conversations that engage youth, parents, schools, communities, all levels of government and all social systems that interface with youth, in a coordinated effort to promote healthy development of youth and prevent and reduce drinking and drug use and its consequences.	• Petaluma Coalition to Prevent Alcohol, Tobacco and Other Drug Problems • Cloverdale Coalition to Reduce Underage Drinking • Sonoma Valley Coalition to Prevent Underage Drinking • West County Coalition for Alcohol and Drug-Free Youth • Friday Night Live programs at Analy HS, El Molino HS, Roseland University Prep, Rancho Cotati and Community Action Partnership • Sonoma County Prevention Partnership
Changing organizational practices	• Implement responsible beverage sales and service practices for events and establishments that sell or serve alcohol, including fairs and festivals, bars, restaurants, and retail outlets. • Explore developmentally appropriate alcohol use policies. For example, suspension from school may provide additional free time for drinking whereas required participation in student/parent education programs and community service does not.	• Petaluma Coalition to Prevent Alcohol, Tobacco and Other Drug Problems • Cloverdale Coalition to Reduce Underage Drinking • Sonoma Valley Coalition to Prevent Underage Drinking • West County Coalition for Alcohol and Drug-Free Youth • Sonoma County Prevention Partnership
Fostering coalitions and networks	• Engage the community and other stakeholders in identifying key community alcohol, tobacco and other drug issues and developing solutions.	• Petaluma Coalition to Prevent Alcohol, Tobacco and Other Drug Problems • Cloverdale Coalition to Reduce Underage Drinking • Sonoma Valley Coalition to Prevent Underage Drinking • West County Coalition for Alcohol and Drug-Free Youth • Sonoma County Peer Outreach Coalition • Sonoma County Prevention Partnership

Strategies	*Activities*	*Resources and innovations*
Educating providers	• Offer training and technical assistance to providers for preventing ATOD problems and making appropriate referrals.	• The Drug Abuse Alternatives Center • Sonoma County Office of Education
Promoting community education	• Increase public awareness of the harmful effects of ATOD use and abuse. • Promote and support media campaigns that are effective in educating the community about how to reduce ATOD use and adult behaviors that encourage such use. • Promote discussions and support for social host ordinances and parent pledges for reducing the availability of alcohol, tobacco and other drugs to youth. • Promote discussions and support for land use and zoning ordinances to address outlet density.	• The Drug Abuse Alternatives Center • Measure O gang activity prevention funds • Social Host Ordinances, Conditional Use Permits, and Deemed Approved Ordinances • Coalition for a Tobacco Free Sonoma County
Strengthening individual knowledge and skills	• Increase the ability of youth to make informed decisions about substance use by increasing knowledge and understanding of the physical changes substances cause and how these changes can affect their health and behavior. • Promote youth involvement in addressing their own health needs and creating appropriate intervention strategies and services. • Promote media literacy education to counter the impacts of marketing to teens of alcohol, tobacco, and other drugs. • When appropriate, engage youth in the process of collecting data related to underage drinking.	• Clean and Sober School Program • AOD prevention curriculum - Project Alert • Project SUCCESS • Friday Night Live programs at Analy HS, El Molino HS, Roseland University Prep, Rancho Cotati and Community Action Partnership • Social Host Ordinances • Sonoma County Peer Outreach Coalition

Perinatal Alcohol, Tobacco & Other Drug Use

"Pregnant women want to do the best they can for their babies; their baby is often what inspires them to make a positive change." - Rita Scardaci, Director, Sonoma County Department of Health Services

"Every individual woman has a different road to follow on her path to recovery."
- Michael Spielman, Executive Director, Drug Abuse Alternatives Center

Pregnancy is normally a time charged with excitement when mothers- and fathers-to-be to look toward the future for themselves and their babies. For some pregnant women, this time is overshadowed by the use of alcohol, tobacco and other drugs. 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, tobacco and other drugs (ATOD) during pregnancy is proven to negatively impact 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. An infant's early care giving environment has a significant effect on his/her later health and development. If alcohol, tobacco and other drug use is identified early in pregnancy and women receive the help they need to stop using, children will have improved outcomes.

Several factors contribute to the high rate of AOD use in Sonoma County. Sonoma County's place as a hub in the methamphetamine and marijuana distribution networks in Northern California supports access to these and other drugs. Sonoma County's unique status as a leader in the wine industry supports and promotes social norms that support drinking. And, Sonoma County has higher rates of smoking generally than other Bay Area counties, which would contribute to higher rates of pregnant and maternal smoking.

The 2010-2014 Maternal, Child and Adolescent Health (MCAH) Five Year Needs Assessment identified preventing alcohol, tobacco, and other drug use by youth, teens and childbearing age women as a top priority for Sonoma County. Similarly, First 5 Sonoma County has selected prenatal ATOD treatment as one of its strategies to improve the health and development of children ages 0-5 years in our community. The commitment of health and human service providers to work collaboratively in addressing this issue has resulted in significant gains toward closing gaps in the current system. The goals of these efforts include:

- Every woman—before, during and after pregnancy—will be asked and educated about the risks of perinatal substance use.
- Women using alcohol, tobacco and other drugs will have immediate access to cessation programs and/or treatment services.
- Substance-exposed newborns and their caregivers will be assisted to ensure a safe and nurturing care-giving environment.

Although systems improvements have been made, continued work is needed to ensure that these families have opportunities for optimal health, growth and development.

Perinatal Substance Use Defined

Prenatal ATOD exposure occurs when a mother has consumed alcohol, tobacco or used drugs during the course of her pregnancy. This is a critical issue because if a pregnant woman drinks alcohol, uses drugs or smokes cigarettes, so does her fetus. These substances cross the placenta freely; and have serious health and development impacts on the developing fetus and on the baby after birth. For these drugs, there is simply no "safe" dose.

Moderate and accidental exposure. Many women unknowingly expose their fetus to drugs, alcohol or tobacco before they realize they are pregnant and abstain from use as soon as they are aware of the pregnancy. Other women continue to use or smoke during pregnancy, either because they are unaware of the risks or because they have not received the support necessary to stop.

Substance abuse. Some women are habitual ATOD users who need intensive interventions and treatment in order to stop using. Many are "polydrug users" —using a variety of substances, including alcohol and illicit drugs. Prescription drug abuse, when a medication is taken by someone other than the patient for whom the medication was prescribed, or taken in a manner or dosage other than what was prescribed, also has a negative effect on the developing fetus. Women who use alcohol and other drugs are also likely to smoke during pregnancy, which adds additional health risks.

The Story Behind the Problem

> ***"Drug use during pregnancy is a problem that affects all women, not just certain demographic subgroups."*** **-** "The Vega Study," Profile of Alcohol and Drug Use During Pregnancy in California[ccii]

Estimates of AOD use during pregnancy vary. Most reliable statistics show that a minimum of 10% of women in the United States have substance abuse problems with alcohol or illicit drugs during pregnancy.[cciii] [cciv] In addition, roughly 11% of women smoke at some point during pregnancy nationally.[ccv] The 1992 Vega study conducted urine toxicology tests in almost 30,000 women presenting for delivery at hospitals across California. While dated, it provides the best statically reliable data on alcohol and other drug use by pregnant women: 11% of pregnant women had used a legal or illicit drug or alcohol within hours or days of delivery. According to data from the Centers for Disease Control and Prevention (CDC), the prevalence of any alcohol use and binge drinking among pregnant and non-pregnant women from 1991 to 2005 did not change substantially over time.[ccvi]

Ethnicity and socioeconomic circumstances. Perinatal AOD use cuts across all economic, racial and social categories. In the US, prevalence of alcohol consumption during pregnancy is highest among women who are white, older, college graduates and higher income. Women with at least a college degree report higher rates of drinking alcohol during pregnancy than high school graduates (14.4% vs. 8.5% respectively).[ccvii] Bay Area specific data from the California Maternal and Infant Health Assessment (MIHA), an annual, statewide-representative survey of women who recently gave birth, shows similar trends for drinking, with reverse trends for tobacco smoking. In its 2005-06 sampling of women, it showed that women who used Medi-Cal as their payor for their delivery drank in smaller percentages than women who used private insurance. Women who had less education, who had lower incomes, who spoke Spanish or were Latino were less likely to drink, but more likely to smoke than women with more education, higher incomes or only spoke English. It is important to note that the women with less education and lower incomes were also more likely to change their behavior between the first and third trimesters, by decreasing use. See Table 10 below, for specific details.

Table 10. Smoking, and alcohol use, among women in the Maternal and Infant Health Assessment (MIHA) 2005-2006 - Sample, by maternal characteristics: SF Bay Area

Table 10.	Smoked during 1st trimester	Smoked during 3rd trimester	Drank during 1st trimester	Drank during 3rd trimester
Income as % of Fed. Poverty Level				
0-100%	12.6	7.0	8.5	3.8
101-200%	8.9	*	10.9	*

Table 10.	Smoked during 1st trimester	Smoked during 3rd trimester	Drank during 1st trimester	Drank during 3rd trimester
201-300%	*	*	14.7	*
301-400%	*	*	19.1	18.9
Over 400%	3.4	*	23.2	22.4
Education				
No high school	*	*	*	*
Some high school	16.4	*	11.4	*
High school/GED	12.0	5.0	10.8	3.0
Some college	10.6	*	20.3	9.4
College grad/+	2.2	*	20.4	22.2
Age in years (from birth certificate)				
15-19	*	*	*	*
20-24	12.5	*	14.6	*
25-29	9.3	2.8	11.4	4.6
30-34	3.7	2.4	18.1	19.1
35+	5.8	*	22.4	22.4
Race/Ethnicity (and birthplace)				
African-American (non-Latina)	13.6	4.9	18.1	*
Asian/Pacific Islander (non-Latina)	*	*	9.8	*
Latina - U.S. born	10.8	*	11.9	*
Latina - not U.S. born	*	*	5.2	3.8
Latinas OVERALL	4.5	*	7.1	4.2
White (non-Latina)	9.4	3.3	27.9	26.5
Language spoken at home				
English	11.2	3.8	24.3	18.8
Spanish	*	*	3.9	3.2
Insurance coverage anytime during pregnancy				
Medi-Cal	10.0	4.0	8.7	4.3
Private	5.6	1.3	20.7	17.7

* Too few events to be reliable.

Source: Regional Table from the 2005-2006 Maternal and Infant Health Assessment (MIHA) surveys. Table B1: Smoking and Alcohol Use. Includes counties of Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, Sonoma.

Life circumstances. A woman's life circumstances play a large role in her prenatal AOD use. Women who are pregnant and who use alcohol and other drugs are more likely to have suffered from emotional, physical and sexual abuse either as children or adults.[ccviii] Importantly, treatment providers and research indicate that men often are involved in introducing women to substances and helping to maintain their chemical dependency.[ccix] A partner's involvement in AOD abuse can strongly influence a woman to begin substance use or continue using during pregnancy. Efforts to help women stop using substances during pregnancy must take into account the important role her partner's addiction plays in her own use.

Connection with mental health disorders. A strong correlation exists between substance abuse and serious, chronic mental health problems. Individuals who use drugs are 4.5 times more likely to have a mental disorder than those who do not use drugs. Heavy, lifetime drug abusers are more than 50% more likely to have a psychiatric disorder than non-users.[ccx] Among California women utilizing drug services during parole, 45% of women with illicit drug dependence and 31% of women with alcohol dependence have "serious co-occurring mental illnesses."[ccxi] Given this strong correlation, efforts to identify and treat substance-abusing women of child bearing age should focus on making connections between county and private mental health systems, Maternal and Child Health programs and alcohol and other drug (AOD) treatment systems.

The Consequences of Perinatal Substance Use

High rates of alcohol, other drug and tobacco use by pregnant women are putting the future health of many Sonoma County children at risk. Prenatal use can lead to physical problems for fetuses that have been exposed. In addition, parental and caregiver use of alcohol and other drugs affects the parent's ability to care appropriately for newborns and older children. A national study found that children whose parents abuse alcohol and other drugs are nearly three times as likely to be abused, and more than four times as likely to be neglected, than are children whose parents are not substance abusers.[ccxii]

Alcohol Use

The harmful impact of alcohol exposure on infants and children is well documented. While there is still debate about the effects of light alcohol consumption on the developing fetus, the research is clear that binge drinking and moderate to heavy use of alcohol during pregnancy has very serious physical and neurological consequences. Alcohol is damaging at all stages of pregnancy. The physical, cognitive and behavioral effects of prenatal AOD use are lifelong. The Surgeon General has determined that no amount of alcohol use during pregnancy is safe.[ccxiii] The American Academy of Pediatrics takes the same position.[ccxiv]

Alcohol use during pregnancy is the "Leading Known Cause of Mental Retardation and Birth Defects in the United States."[ccxv] Fetal Alcohol Syndrome (FAS) is a serious, lifelong condition caused by exposure to alcohol during gestation and is characterized by a number of symptoms: specific facial characteristics; growth deficits; mental retardation; heart, lung, and kidney defects; hyperactivity; behavioral and memory problems; poor coordination and motor skill delays; and central nervous system abnormalities. FAS is estimated to occur in 1 to 3 out of every 1,000 live births in the United States each year.[ccxvi] [ccxvii] Many more children are not classified as having FAS, but have some of the characteristics of FAS and will suffer the consequences of prenatal exposure to alcohol throughout their lives.[ccxviii]

Drug Use

The implications of prenatal exposure to both illicit drugs and non-therapeutic use of prescription drugs during pregnancy vary widely from "almost imperceptible problems discovered throughout

development to devastating birth defects, mental retardation, or even death."[ccxix] Birth complications attributable to drug use can include pre-term delivery, low birth weight, smaller than normal head size, miscarriage, genital and urinary tract deformities, and nervous system damage.

Risks Associated with Specific Drugs

- Marijuana: slow fetal development and low birth weight.
- Cocaine: birth defects (urinary tract and heart defects), neonatal stroke and heart attack, placental abruption, feeding difficulties, sleep disturbances, physical and mental delay, extreme irritability and possible reduction of child IQ levels.
- Heroin and other opiates: newborn withdrawal, miscarriage and premature birth, increased risk of low child IQ, physical and mental retardation, behavior problems and increased risk of Sudden Infant Death Syndrome.
- Amphetamines (including methamphetamine): birth defects, pregnancy complications, slow fetal growth, premature delivery and possible increase in congenital heart defects.

Tobacco Use

- **Women who smoke or are exposed to "second hand smoke" when they are pregnant subject their children to significantly increased health risks.** Smoking during gestation reduces the supply of oxygen and nutrients to the fetus and is associated with low-birth weight, poor birth outcomes, including poor fetal growth and premature delivery. Both of those contribute to infant illness and death. Pregnant women who smoke are more likely to have ectopic pregnancies (pregnancies outside of the uterus) and their babies are more likely to die from sudden infant death syndrome (SIDS).[ccxx] Children whose mothers smoked during pregnancy are more likely to be affected by colic, asthma and childhood obesity.[ccxxi] [ccxxii] Babies and children who breathe secondhand smoke can suffer from health problems including bronchitis, pneumonia, ear infections, asthma and are three times more likely to die from SIDS. [ccxxiii]
- **The American College of Obstetricians and Gynecologists (ACOG) recommends that perinatal providers uniformly counsel pregnant women to abstain from smoking during pregnancy.** According to ACOG, "smoking is one of the most important modifiable causes of poor pregnancy outcomes in the United States."[ccxxiv]

Key Findings on Perinatal Alcohol, Tobacco and Other Drug Use in Sonoma County

- **Illicit drug Use by pregnant women in Sonoma County is a major problem.** Sonoma County women are using AOD (including tobacco) during pregnancy in significant numbers, at rates above the national average, making prenatal alcohol and drug use a serious cause for concern. In 2006, the Drug Free Babies Project and Kaiser Permanente surveyed nearly half of pregnant women in Sonoma County to determine if they used AOD (including tobacco) during pregnancy. More than a quarter of the women surveyed disclosed they had used alcohol, tobacco or another drug during their pregnancy.[ccxxv] For 2006-08, the rate of hospital discharges in Sonoma County which included a diagnosis of substance abuse (other than tobacco) at the time of discharge was 19.2 per 1,000 compared to the state median of 14.24.[ccxxvi] Though it is likely that these data underestimate the true prevalence rate, it demonstrates that prenatal use in Sonoma County is higher than other areas in the state.
- **Tobacco is the most frequently used substance by pregnant women.** The 2007 DFB survey found that 13% of pregnant women reported using tobacco during pregnancy.

- **Alcohol is the second most frequently used substance by pregnant women in Sonoma County.** The 2007 DFB survey found that 6% of women self-reported using alcohol during pregnancy.
- **Marijuana is the drug used most often, but for pregnant women in treatment, methamphetamine is the primary drug of abuse.** The 2007 DFB survey found that 5.6% of the pregnant women surveyed reported using marijuana during pregnancy. For pregnant Sonoma County women in treatment, methamphetamine is the primary drug of abuse.[ccxxvii] However, 80% of AOD treatment system admissions are criminal justice referrals and, thus, these data do not reflect the use of methamphetamine by the general population.[ccxxviii]
- **AOD use is linked to child neglect and abuse.** Approximately 49% of open child welfare cases in Sonoma County are impacted by methamphetamine. Parent methamphetamine use is correlated with caretaker absence or incapacitation and neglect and with higher rates of domestic violence and child medical issues.[ccxxix]
- **Community providers have reported an increase in neonatal withdrawal from prescription drugs.** Since 2008, the California Department of Alcohol and Drug Programs has recognized misuse and abuse of prescription drugs such as pain relievers, tranquilizers, stimulants and sedatives as a growing problem among youth and adults. Prescription drug misuse among young adults 18-25 years is approximately 15.6%.[ccxxx] Over the past several years, local providers have reported to the Perinatal ATOD Action Team that they are seeing an increase in the numbers women delivering on legal drugs that result in neonatal withdrawal and have the potential to impact the mother's ability to respond to her infant's needs. The Sonoma County Perinatal Alcohol and Other Drugs (AOD) Action Team is investigating this increase in neonatal withdrawal from prescription drugs to develop a plan to ameliorate it.

Key Indicators to Track Progress

Health Indicators
The percentage of pregnant women in Sonoma County screened by perinatal providers for alcohol, drug and tobacco use during current pregnancy.
The percentage of women in Sonoma County who report alcohol, drug and tobacco use during current pregnancy at screening.
The percentage of pregnant women in Sonoma County with positive screening who meet the criteria for admission to treatment and successfully complete a treatment plan or leave treatment early with satisfactory progress.
The percentage of babies born in Sonoma County with positive toxicology for fetal AOD exposure.
The number of publicly funded treatment beds and day treatment slots in Sonoma County available to pregnant women and their children.

Accomplishments and Progress Made Since 2008

Given the difficult economic times and the stigma attached to pregnant women who use alcohol and other drugs, it is important to note that continuing services for screening, prevention and treatment in the county is a major accomplishment. The number of women who have been able to enter treatment has increased, due to the advocacy on a policy and individual level. First 5 Sonoma continues to provide funding for the Perinatal Placement Specialist, Smoke Free Babies and additional treatment capacity. The Perinatal AOD Action Team has worked to improve the

Perinatal System of Care and establish an ongoing quality improvement plan. The MCH home visiting programs, Nurse Family Partnership, Teen Parent Connection and MCH Field Nursing programs have prioritized working with pregnant women struggling with ATOD use with the goal of increasing readiness and motivation to reduce dependency and/or enter treatment. The MCAH Program has developed and disseminated valuable education resources and fostered collaboration between county departments and medical providers. The Sonoma County Family, Youth and Children's (FY&C) Services program has prioritized the needs of substance exposed newborns and is in the process of streamlining their assessment and referral processes with hospitals and other parent support agencies.

Prior to 2004 when DFB started, screening and referral were sporadic and treatment information was not centralized. When a medical provider—either a hospital or physician—identified a woman needing treatment, that provider had to contact multiple programs to find an appropriate placement. Difficulty locating appropriate treatment may have kept some providers from conducting screenings. Centralization of referral and treatment through the DFB's Perinatal Placement Specialist has changed this situation. More than 90% of perinatal care providers in community health centers and private practice in Sonoma County have been trained on best screening practices and how to access the Perinatal Placement Specialist. Currently the majority of perinatal providers in Sonoma County screen pregnant women for ATOD use and refer women to the Perinatal Placement Specialist on a regular basis.

The Perinatal AOD Action Team engaged in social marketing activities to spread the word about the dangers of prenatal exposure to ATOD. The DFB Program is making a difference in reducing exposure of Sonoma County babies to alcohol, drugs and tobacco before birth and helping women who will soon be mothers to quit smoking and find their way into treatment.

Current Service System Resources, Gaps and Opportunities

Resources

In Sonoma County, perinatal providers (health centers and hospitals) and the AOD treatment system work closely together to screen, assess, refer and engage in services pregnant women who are using tobacco, alcohol and other drugs. Medical providers screen and refer women for assessment and the AOD treatment system provides counseling, and intensive perinatal day treatment programs and residential perinatal programs to help pregnant women stop using.

Drug Free Babies Program. The primary goals of the Drug Free Babies (DFB) Program are to implement universal screening of all pregnant women in Sonoma County, to ensure that women who need treatment get it regardless of their ability to pay, and to educate pregnant women and the community about the dangers of prenatal exposure. Through DFB Program, Sonoma County has made major advances in the past six years toward creating a network to reduce prenatal ATOD exposure. The network includes hospitals, private prenatal care providers, community health centers, ATOD treatment programs, and the county Department of Health Services. Health care providers screen and refer women for assessment and the AOD treatment system provides counseling, and intensive perinatal day treatment programs and residential perinatal programs to help pregnant and parenting women stop using. Key components of the program include professional training and access to the program's Perinatal Placement Specialist, an alcohol and other drug specialist, who will assess perinatal women identified at-risk and link them to treatment when appropriate. Currently all of Sonoma County's community health centers and about half of the private providers participate in the DFB program.

Kaiser Permanente's Early Start Program. The Early Start Program is an integral part of Kaiser Permanente's prenatal services. Its goal is to reduce the negative maternal and neonatal

outcomes associated with prenatal substance use by making education and early intervention accessible to pregnant women. All pregnant women are screened on entry to prenatal care and those considered at higher risk for using tobacco, alcohol or other drugs during pregnancy are referred to the Early Start Specialist. The Early Start Specialist, a licensed counselor, provides education to the patient about the impact of tobacco, alcohol and other drug use on the developing fetus and helps her develop a plan to stop using substances. Patients are directed to in-depth resources at Kaiser Permanent and in the community if necessary. Early Start also offers individual and couples counseling, stress management, parenting information and follow-up care after delivery. Kaiser has found the Early Start program to be very successful in improving birth outcomes.

Alcohol and other drug treatment. Gender-specific treatment is crucial to address the unique needs and concerns of pregnant women. In Sonoma County, a pregnant woman may attend either a perinatal day treatment program, lasting 180 day sessions over the course of a year, or a 90- or 120-day perinatal residential treatment program. These programs support women to achieve and maintain clean and sober living, deliver healthy infants, strengthen family units, and lead productive lives. Many of these programs offer core alcohol and drug treatment, tobacco cessation services, childcare, transportation, parenting skills, child development education, counseling and a variety of other services. The goal is to help a woman abstain from use during pregnancy and continue a clean and sober life after delivery.

Smoke Free Babies Program. Early in the development of the Perinatal ATOD System of Care, providers noted that many pregnant women do not attend smoking cessation classes for the general population due to the stigma of smoking during pregnancy. In order to intervene with pregnant smokers, the Northern California Center for Well-Being, in conjunction with prenatal health care providers and the Sonoma County Department of Health Services, developed an intervention specifically designed to support pregnant and post partum women. Originally developed with funding from the March of Dimes, the program is now funded by First 5 Sonoma County to serve pregnant and postpartum women who smoke, are at risk of returning to smoking or have smokers in their household. The program offers four to six individual sessions in person or by phone to support a woman's efforts to establish a smoke-free environment for their family and to reduce and quit smoking. Prenatal health care providers make referrals directly to the program. Staff is also available to make educational presentations regarding tobacco use during pregnancy and second-hand smoke risk reduction to pregnant and parenting women at AOD treatment programs and other sites serving this population.

Gaps

A woman's ability to access treatment programs is determined in large part by whether she has medical coverage that pays for treatment—either private insurance or Medi-Cal. Most women with private insurance or the ability to pay for treatment will go to a private treatment program. In addition, some health insurance policies may limit coverage or offer a sub-optimal level of care to pregnant women. In Sonoma County, women with Medi-Cal or women with no insurance coverage, who cannot afford treatment, will have even greater difficulty finding treatment. They may be eligible for a publicly funded treatment slot, but they may have significant wait time.

Residential treatment capacity. Between FY 2006-07 and 2010-11, there have been 16 to 22 publicly funded perinatal residential treatment beds at two local facilities. Women may bring their children to treatment with them. Occasionally, residential facilities will limit the number or age of children as they reach their licensing cap for children in residence. At any one time during

the last several fiscal years, residential facilities have unfunded capacity. With additional funds, the programs would be able to serve additional women.

Outpatient and perinatal day treatment capacity. Between FY 2006-07 and 2010-11, there have been a range of 17 to 26 treatment slots for women at a prenatal day treatment center, which offers childcare and transportation. Some of the slots have specific criteria that must be met to utilize the funding. If women are unable to enter this program due to lack of space, they may attend an outpatient program, which may not be focused solely on treating pregnant women.

Pregnant women are one of designated groups that receive priority for publicly funded treatment. Both residential and day treatment providers now anticipate that the demand for publicly funded perinatal treatment will soon outstrip capacity as more women are screened, assessed and referred to treatment. Post-partum and parenting women seeking treatment are frequently placed on a waiting list or accept a less than optimal level of care in an outpatient program until space became available.

Data collection. Data collection is a serious challenge. Even the statewide system of Maternal and Infant Health Assessment (MIHA) surveys, while comparing data across the state, is collected by multiple staff who are working with limited resources. Funding, confidentiality, reliability of self-reporting, multiple people handling the data as well as the technological complexity of different hospitals using different computer systems all contribute to the challenges.

Opportunities

- Several years of experience have demonstrated that the data collection systems in place do not collect all the required data to track progress. Since the system's development, there has been an increase in evidenced based practices, evaluation and cost benefit analysis. Several initiatives may serve to increase data availability.
- In addition to the centralization of resources and referral, Drug Free Babies is working with hospitals to implement a countywide protocol for evaluating and reporting cases involving possible prenatal ATOD exposure. DFB is working to develop reliable local data on the prevalence of ATOD use among pregnant women so that progress on this issue can be tracked.
- Hospitals with delivery services are being asked to collect and share data on the number of newborn needs assessments conducted, the number of positive and negative maternal and newborn toxicology studies performed, and the number of newborn referrals made to Family, Youth and Children Services (CPS).
- Family, Youth and Children Services (CPS) is implementing an assessment model called *Structured Decision Making*. This evidence-based tool will assist CPS to improve outcomes for substance exposed newborns referred to their agency.
- The Sonoma County Board of Supervisors Ad Hoc Upstream Investments Committee seeks to promote an "upstream" philosophy throughout the County. The emphasis is on prevention-focused intervention and policies for children, families, individuals and the community to increase equality and promote opportunities that reduce future monetary and societal costs.
- Health Care Reform will impact how work is organized in some organizations and who will be providing the various levels of intervention and treatment services. This may impact data collected and the indicators selected to measure progress.

What Will It Take to Make Progress on Perinatal Alcohol, Tobacco & Other Drug Use?

Despite the work of the County of Sonoma, providers, Kaiser's Early Start program and the Drug Free Babies Program, significant improvements can still be made to the system of perinatal ATOD screening, referral and treatment that will result in a stronger system with better results for women and children.

Spectrum of Prevention

The suggested activities at each level of the Spectrum of Prevention are opportunities for improving the health of Sonoma County's newborns and children.

Strategies	*Activities*	*Resources and Collaborations*
Influencing policy and legislation	• Advocate at the state and national level for increased funding for perinatal ATOD treatment that would serve both pregnant and parenting women. • Urge the State to compile statewide prevalence data by updating the 1992 statewide perinatal substance abuse prevalence study.	• Drug Free Babies Program • Perinatal AOD Action Team
Mobilizing neighborhoods and communities	• Neighborhoods can work to minimize the presence of drug use in their communities through collaborative efforts with law enforcement and community groups.	• Petaluma Coalition to Prevent Alcohol, Tobacco and Other Drug Problems • Cloverdale and Sonoma Valley Coalitions to Reduce Underage Drinking • West County Coalition for Alcohol and Drug-Free Youth
Changing organizational practices	• Continue to support the effective implementation of universal screening to ensure that every pregnant and delivering woman in Sonoma County is screened for ATOD use. Hospitals can support this standard of care by requesting that prenatal care providers include the DFB screening form in the information sent to labor and delivery. • Establish systems at all delivery hospitals for monitoring the prevalence of cases where toxicology studies and newborn assessments have been done and reports made to CPS.	• Maternal Child and Adolescent Health Programs (MCAH) • Perinatal AOD Action Team

Strategies	*Activities*	*Resources and Collaborations*
Fostering coalitions and networks	• Encourage medical providers and the Health Department to actively participate in gathering and reporting data on ATOD prevalence and screenings. • Strengthen and improve ongoing assessment and referral systems.	• Drug Free Babies Program • Perinatal AOD Action Team • Substance Exposed Infant Work Group • Family Recovery Project
Educating providers	• Conduct consistent and ongoing training of the community's perinatal health care providers in best practices for ATOD screening, engagement and referral. • Educate and train health care providers and public institutions to raise the awareness of the extent of the problem; increase recognition of addiction as a chronic disease; reduce the stigma.	• Perinatal AOD Action Team
Promoting community education	• Strengthen local collaborative and provider efforts to spread the word about the dangers of alcohol, tobacco, and drug use during the perinatal period. • Increase social marketing to create a community norm that prenatal ATOD use has significant consequences on the long-term health of children and families.	• Perinatal AOD Action Team • Maternal Child and Adolescent Health Programs (MCAH)
Strengthening individual knowledge and skills	• Expand education to women, families and the general public to understand the full, devastating impacts of alcohol, tobacco and drug use on the developing fetus.	• Drug Free Babies Program • Kaiser's Early Start Program • Northern CA Center for Well-being-Smoke Free Babies Program

Appendix I: Tables of Indicators

Children's Oral Health

1. The percentage of kindergarten and 3rd grade children with untreated tooth decay in primary or permanent teeth.

Data	*Source*	*New Findings*	*Source*
Local: 76% of Sonoma County school children assessed by the Mighty Mouth Program over three years had a history of decay.	Mighty Mouth Program Data, Give Kids a Smile Day Data, California Smile Survey.	***Local:*** Overall, at the 2009 screening, 52% of students had a history of tooth decay, 16% had untreated tooth decay, and about 5% of students need urgent dental care. 46% of kindergarten students and 58% of 3rd graders have experienced tooth decay, and over 16% of them have *untreated* decay.	Sonoma Smile Survey 2009
State: Over 70% of California children have a history of tooth decay. Of the states surveyed by California Smile Survey, only Arkansas ranked below California in the number of children with a history of decay.	California Smile Survey, p. 4.	***State:*** 28% of children from kindergarten to third grade have untreated tooth decay. 30% of California's children have one or more oral health problems, including toothaches, decay or cavities, bleeding gums and broken teeth.	Children Now California Report Card 2010.
National: According to the Surgeon General's Report, 52% of American children aged 5-9 have tooth decay. According to the CDC Trends in Oral Health Status report, 28% of children 2-5 have untreated decay in primary teeth and 59% of 6-11 year olds have untreated decay in primary or permanent teeth.	Surgeon General Report, p. 63. Centers for Disease Control, Trends in Oral Health Status: United States, 1988-1994 and 1999-2004, Tables 5 and 11.	***National:*** NA	

2. The percentage of low-income children with emergent or urgent (Class II or III) dental needs.

Data	*Source*	*New Findings*	*Source*
Local: Thirty nine percent (39%) of the school children assessed by Mighty Mouth Program over three years had untreated decay (19% emergent needs, 20% urgent needs). Give Kids a Smile Day found that 60% of low-income children assessed over three years had untreated decay.	Mighty Mouth Program Data, Give Kids a Smile Day Data.	***Local:*** 67% of children in low-income families had a history of tooth decay, 21% had untreated tooth decay and 7% needed urgent dental care.	Sonoma Smile Survey 2009
State: One-third of low-income children in California had untreated decay, compared to one-fifth of higher income children.	California Smile Survey, p. 8.	***State:*** 4% of children from kindergarten to third grade are in urgent need of dental care because of pain or infection.	Children Now California Report Card 2010.
National: More than one-third (37%) of low-income children had untreated decay in a primary tooth, compared to 17% of higher income children. The CDC found that the poorer the child, the higher the likelihood of untreated decay. 54% of very poor children (<100% FPL) had untreated decay, 49% of children living between 100-199% of the FPL had untreated decay. While 32% of children living above 200% of the FPL had untreated decay.	Surgeon General Report, p. 63. Centers for Disease Control, Trends in Oral Health Status: United States, 1988-1994 and 1999-2004, Table 5.	***National:*** Parents of 19% of children reported that their children had decayed teeth or cavities within the past 6 months, while 11% of children had a toothache during that time.	The National Survey of Children's Health 2007

3. The percentage of children ages 2-18 with dental insurance.

Note: in 2005 the data reviewed was children without dental insurance. Current data represents children with dental insurance.

Data	*Source*	*New Findings*	*Source*
Local: In 2005, 16% of Sonoma County children had no dental insurance.	California Health Interview Survey, 2005.	***Local:*** In 2007, 72% of Sonoma County children had dental insurance.	2007 CHIS
State: In 2005, 17% percent of California children had no dental insurance. CSS reports that 23% of California children had no dental insurance.	2005 CHIS, 2005 California Smile Survey.	***State:*** 80% of California children had dental insurance.	2007 CHIS
National: Nationally, 23% of children are without dental insurance. This is roughly 16.3 million children in the U.S.	Lewis, C. et al., *Dental insurance and its impact on preventive dental care visits for U.S. children*, Journal of the American Dental Association, Vol. 138, No. 3, 369-380. http://jada.ada.org/cgi/content/abstract/138/3/369	***National:*** 73% of people under age 65 had some form of dental insurance. Children with Medicaid and SCHIP had limited dental coverage in 2008. For every child without medical insurance, there are 2.6 who lack dental insurance.	2008 National Health Interview Study www.cdc.gov/OralHealth/publications/factsheets/sgr2000_fs3.htm

4. The percentage of children aged 2 -18 years who have not seen a dentist in the previous 12 months.

Data	*Source*	*New Findings*	*Source*
Local: The Children Now Data Book for 2006 reports that 17% of Sonoma County children had not seen a dentist within the last year. Twenty-three percent (23%) of children screened by Family Action and MCAH at twelve preschools and ten elementary school 3rd grade classes in 2002 had not been to a dentist for over one year. Another 13% had never been to a	Children Now Data Book, Family Action and Maternal Child and Adolescent Health Survey 2002.	***Local:*** 87% of Sonoma County children report seeing a dentist regularly (they have seen a dentist in the previous 12 months), so that 13% had not seen a dentist in 12 months.	2007 CHIS

Data	***Source***	***New Findings***	***Source***
dentist.			
State: The Children Now Data Book for 2006 reports that 20% of California children had not seen a dentist within the last year. CSS reported that 17% of kindergarteners and more than 5% of 3rd graders had never been to a dentist.	Children Now Data Book, California Smile Survey, p. 8.	***State:*** 20% of California children report not having seen a dentist within the past 12 months.	2007 CHIS
National: In 2004, 23% of children age 2-17 had not seen a dentist within the past year. 25% of minority children entering kindergarten have never visited a dentist.	Child Trends Data Bank, Surgeon General Report, p.252.	***National:*** In 2009, 78% of US children report having seen a dentist in the past 12 months.	CDC FastStats, Oral Health 2009 www.cdc.gov/nchs/fastats/dental.htm

5. The percentage of children with dental sealants.

Data	Source	***New Findings***	Source
Local: Mighty Mouth Program data over three years shows that 17% of children surveyed had sealants.	Mighty Mouth Data.	***Local:*** Percent (17%) has not changed	Sonoma Smile Survey 2009
State: CCS found that 28% of California children had sealants.	California Smile Survey.	***State:*** N/A	
National: Healthy People 2010 reports that in 2002, 23% of children 8-years old have received sealants and 15% adolescents aged 14 years.	Healthy People 2010.	***National:*** N/A	

6. The percentage of children with access to fluoridated public water.

Data	***Source***	***New Findings***	***Source***
Local: 3% of Sonoma County residents have access to fluoridated public water.	Sonoma County Health Profile 2000.	***Local:*** 3% of Sonoma County residents have access to fluoridated public water.	Sonoma County Health Profile

			2000.
State: 30% of California residents have access to fluoridated public water.	Sonoma County Health Profile 2000.	***State:*** 27% of Californians have access to fluoridated public water.	Children Now California Report Card 2010.
National: The Surgeon General's Report cites 62% of the U.S. consumes water with optimum fluoride levels.	Surgeon General's Report, p. 161 Healthy People 2010.	***National:*** 69% of Americans have access to fluoridated public water.	Children Now California Report Card 2010.

Childhood Obesity, Nutrition and Fitness

Overweight and Nutrition: Promote good nutrition and healthier weight.

1. The percentage of mothers who breastfeed their babies for 6 months.

Data	***Source***	***New Findings***	***Source***
Local: In 2004, 94% of Sonoma County women breastfed their babies at the time of hospital discharge. The percentage of women exclusively breastfeeding was 69.7%.	Genetic Disease Branch, Newborn Screening Database, 2004.	***Local:*** In 2008, the initiation of breastfeeding in Sonoma County during early postpartum was up to 96.5%.	County Health Status Profiles 2010.
		Local: The percentage of mothers still breastfeeding exclusively at 6 months in the first half of 2010 was 30%, but only 19% in the second half of 2010 among patients of the Santa Rosa Community Health Centers	HEAL Breastfeeding Reporting 2009-October 31, 2010
State: 86.5% of young children 0-5 who were breastfeed or received breast milk for any length of time.	National Survey of Children's Health, Data Resource Center on Child and Adolescent Health, 2003.	***State:*** 86.2% of young children 0-5 who were breastfeed or received breast milk for any length of time.	County Health Status Profiles 2010.

Data	*Source*	*New Findings*	*Source*
National: 72.3% of young children 0-5 who were breastfeed or received breast milk for any length of time. 41% of white women and 42% Hispanic women were breastfeeding at 6 months. 21% white women, 22% Hispanic women were breastfeeding at 12 months.	CDC Breastfeeding Rates Among U.S. Women, 2005.	73.9% of young children 0-5 who were breastfeed or received breast milk for any length of time.	County Health Status Profiles 2010.

2. The percentage of children in Sonoma County who eat five servings of fruits & vegetables daily.

Data	*Source*	*New Findings*	*Source*
Local: In 2005, 50.8% of children ages 2-11 and 31.3% of youth ages 12-17 reported eating five or more servings of fruits and vegetables.	2005 CHIS	***Local:*** In 2007, 60.9% of children ages 2 and older reported eating five or more servings of fruits and vegetables per day, a significant increase.	2007 CHIS
State: In 2003, almost one in five (19.2%) adolescents (12-17 yrs) reported eating three or more servings of vegetables the previous day. Note: In 2001, fewer than half of California's children and adolescents (47 and 40 percent, respectively) meet the CA DHS's goal of consuming five or more fruits or vegetables per day.	2003 CHIS (Note CHIS 2001 measured fruit and vegetable intake in combination).	***State:*** In 2007, 20.3% of California adolescents 12-17 reported eating five or more services of fruits and vegetables. (Note: the 2003 data represents 3 servings.)	2007 CHIS
National: In 2005, 20% of high school students reported eating five or more servings of fruits and vegetables each day.	CDC, Youth Risk Behavior Surveillance (YRBSS)—United States, 2005.	***National:*** In 2009, 22% of students reported eating five or more servings of fruits and vegetables each day.	YRBSS 2009, *Morbidity and Mortality Weekly Reports, Surveillance*

Data	Source	New Findings	Source
			Summaries, June 4, 2010/Vol. 59/No. SS-5.

3. Percentage of students ages 6-18 who consumed fast food at least one time in the past week.

Data	Source	New Findings	Source
Local: In 2005, 78.1% of Sonoma County children over 2 through adolescence reported eating no fast food the prior day; 16% reported eating fast food one time.	2005 CHIS	***Local:*** In 2007, 45.4% of the same group reported eating no fast food the week before; 33.3% reported eating fast food once.	2007 CHIS
State: In 2005, 65.9% of California children reported eating no fast food the day before; 29.3% reported eating fast food one time.	2005 CHIS	***State:*** In 2007, 25.6% of California children reported eating no fast food the day before; 32.5% reported eating fast food one time.	2007 CHIS
National: n/a		***National:*** n/a	

Physical Activity: Promote regular physical activity.

1. The percentage of students who participate in moderate or vigorous physical activity for at least 20 minutes, three or more days per week.

Data	Source	New Findings	Source
Local: In 2005-2006, 35% of Sonoma County 7th graders met the basic fitness standards.	California Department of Education, Standards and Assessment Division.	***Local:*** In 2007, 68% of adolescents engaged in vigorous activity three or more times during the previous week. In 2008, 35% of Sonoma County 7th graders met the basic fitness standards.	2007 CHIS California Department of Education, Standards and Assessment Division.
State: Approximately two-thirds (66%) of adolescents (12-17 yrs) engaged in vigorous activity three or more times during the previous week, a level below the HP 2010 objective of 85%.	2003 CHIS	***State:*** 64% of adolescents (12-17 yrs) engaged in vigorous activity three or more times during the previous week.	2007 CHIS

Data	*Source*	*New Findings*	*Source*
National: About two-thirds of young people in grades 9–12 are not engaged in recommended levels of physical activity. Daily participation in high school physical education classes dropped from 42% in 1991 to 33% in 2005. In 2005, 45% of 9th grade students but only 22% of 12th grade students attended physical education class daily.	National Youth Risk Behavior Surveillance Survey: 1991-2005.	***National:*** In 2009, nationwide, 37.0% of students had been physically active for a total of at least 60 minutes per day on 5 or more days during the 7 days before the survey.	2009 YRBSS

2. Percentage of 7th graders that achieve the Healthy Fitness Zone for all 6 areas of the annual California Physical Fitness test.

Data	*Source*	*New Findings*	*Source*
Local: 34.9% of Sonoma County 7th graders achieved Healthy Fitness Zones for all 6 areas in 2005-06.	CDE Physical Fitness Test	34.8% of 7th graders achieved Healthy Fitness Zones for all 6 areas in 2008-09.	CDE Physical Fitness Test
State: 29.6% of 7th graders statewide achieved Healthy Fitness Zones for all 6 areas in 2005-06.	CDE Physical Fitness Test	***State:*** 34.2% of 7th graders statewide achieved Healthy Fitness Zones for all 6 areas in 2008-09.	CDE Physical Fitness Test
National: N/A		***National:*** N/A	

3. The proportion of adolescents and children who walked, biked, or skated to or from school in the past week.

Data	*Source*	*Updated*	*Source*
Local: ***Note:*** Question was not asked in prior years.		***Local:*** In 2007, 15.2% of adolescents and children in Sonoma County walked, biked or skated to school in the previous week.	2007 CHIS
State: Question was not asked in prior years.		***State:*** in 2007, 31% of adolescents and children in California walked, biked or skated to school in the previous week.	2007 CHIS
National: N/A		***National:*** N/A	

Youth Alcohol, Drug and Tobacco Use

1. The percentage of teens that have not used alcohol or drugs in the past 30 days.

Data	*Sources*	*Updated*	*Source*
Local: In 2005-06, 13% of 7th graders; 31% of 9th graders; 48% of Sonoma County's 11th grade students report drinking a whole drink of alcohol in the past 30 days in Sonoma County.	California Healthy Kids Survey (CHKS), Sonoma County 2005-06.	***Local:*** In 2007-09, 13% of 7th graders, 28% of 9th graders and 44% of 11th graders reported the same.	CHKS, Sonoma County 2007-09.
State: In 2005-06, 13% of 7th graders; 28% of 9th graders; 37% of California's 11th grade students report drinking alcohol in the past 30 days.	CHKS, Sonoma County and California 2005-06.	***State:*** In 2007-09, 15% of 7th graders; 27% of 9th graders; 36% of California's 11th grade students report drinking alcohol in the past 30 days.	CHKS, California 2007-09.
National: 43.3% of 9th through 12th graders had at least one drink of alcohol in the past 30 days.	YRBSS 2005	***National:*** 41.8% of 9th through 12th grade students had had at least one drink of alcohol on at least 1 day in the past 30 days.	YRBSS 2009

2. The percentage of adolescents (ages 12-17) who engaged in binge drinking in the past 30 days.

Data	*Sources*	*Updated*	*Source*
Local: In 2005-06, 4% of 7th graders; 19% of 9th graders; 34% of Sonoma County's 11th grade students report binge drinking alcohol in the past 30 days.	CHKS, Sonoma County 2005-06.	***Local:*** In 2007-09, 4% of 7th graders, 12% of 9th graders and 26% of 11th graders in Sonoma County report binge drinking in the past 30 days.	CHKS, Sonoma County 2007-09.
State: In 2005-06, 4% of 7th graders; 13% of 9th graders, 21% of California's 11th grade students report binge drinking alcohol.	CHKS, California 2005-06.	***State:*** In the state, in 2007-09, 7% of 7th graders, 15% of 9th graders and 22% of 11th graders so reported.	California Healthy Kids Survey, California 2007-09.
National: Rates of binge alcohol use in 2005 were 2% percent among 12 and 13 year olds, 8% percent among 14 and 15 year olds, and 19.7% among 16 and 17 year olds. Although there were declines in past month and binge	SAMSHA – Results from the 2005 National Survey on Drug Use and Health: National Findings.	***National:*** 24.2% of students had had five or more drinks of alcohol in a row (i.e., within a couple of hours) on at least 1 day in the past 30 days.	YBRSS 2009.

alcohol use among youths aged 12 to 17 between 2004 and 2005, overall underage (persons aged 12 to 20) past month and binge drinking rates have remained essentially unchanged since 2002. In 2005, nearly 7.2 million (18.8 percent) persons aged 12 to 20 were binge drinkers.			

3. The percentage of adolescents who report that they ever drove after drinking alcohol (9th and 11th grade only).

Data	*Sources*	*Updated*	*Source*
Local: In 2005-06, 44% of 7th graders, 20% of 9th graders and 35% of 11th graders reported drinking and driving or being in a car driven by someone who has been drinking in Sonoma County.	CHKS, Sonoma County, 2005-06.	***Local:*** In 2007-09, 22% of 9th graders and 28% of 11th graders so reported.	CHKS, Sonoma County 2007-09.
State: In 2005-06, 22% of 9th graders and 30% of 11th graders reported drinking and driving or being in a car driven by someone who has been drinking in California.	CHKS, California, 2005-06.	In 2007-09, 29% of 9th graders and 30% of 11th graders reported the same in California.	CHKS, California 2007-09.
National: In 2005, 28.5 % of 9th to 12th graders report they rode in a car or other vehicle with a driver who had been drinking one or more times during the 30 days preceding the survey.	YRBSS 1991-2005.	***National:*** 28.3% of students nationwide had ridden one or more times in a car or other vehicle driven by someone who had been drinking alcohol in the past 30 days.	YBRSS 2009.

4. The percentage of adolescents who perceive great risk associated with alcohol use of five or more drinks per week.

Data	*Sources*	*Updated*	*Source*
Local: In 2005-2006, student awareness of the harms of alcohol was 92% among 7th graders, 88% among 9th graders, and 91% among 11th graders.	CHKS, Sonoma County, 2005 - 06.	***Local:*** In 2007-09, student awareness of the harms of alcohol was 47% among 7th graders, 40% among 9th graders, and 41% among 11th graders.	CHKS, Sonoma County 2007-09
State: In 2005-06, student awareness of the harms of alcohol was 91% among 7th graders, 88.5% among 9th graders, and 90% among 11th graders and 87% among students from alternative schools.	CHKS, California, 2004.	State: In 2007-09, student awareness of great risk of frequent alcohol use was 45% among 7th graders, 48% among 9th graders, and 49% among 11th graders.	CHKS, California 2007-09
National: Almost four fifths (77.9 %) of youth aged 12 to 17 enrolled in school reported in 2005 they had seen or heard drug or alcohol prevention messages at school in the past year, a percentage similar to the 2004 estimate of 78.2%.	YRBSS, 2005.	NA	

5. The percentage of adolescents who perceive great risk associated with marijuana use of 1-2 times per week.

Data	*Sources*	*Updated*	*Source*
Local: In 2005-06, student awareness of the harms of marijuana was 93% among 7th graders, 85% among 9th graders, and 80% among 11th graders. Perceived risk of frequent marijuana use decreased with grade level (7th grade – 72% extremely harmful, 11th grade 37%).	CHKS, Sonoma County 2005-06.	***Local:*** Student awareness of the harms of marijuana was 58% among 7th graders, 42% among 9th graders, and 35% among 11th graders. Perceived risk of frequent marijuana use decreased with grade level (7th grade – 58% extremely harmful, 11th grade 35%).	CHKS, Sonoma County 2007-09.
State: In 2005-06, student awareness of harms of marijuana was, 93.5% among 7th graders, 89% among 9th graders, and 87% among	CHKS, California 2005-06	***State:*** Student awareness of the harms of marijuana was 7% among 7th graders, 81% among 9th graders, and 81% among 11th graders.	CHKS, California 2007-09

11th graders and 71.5% among students from alternative schools.		Perceived risk of frequent marijuana use decreased with grade level (7th grade – 53% extremely harmful, 11th grade 48%).	
National: Almost four fifths (77.9 %) of youth aged 12 to 17 enrolled in school reported in 2005 they had seen or heard drug or alcohol prevention messages at school in the past year, a percentage similar to the 2004 estimate of 78.2%. Past month use of an illicit drug was lower for youth exposed to such messages in school (9.2 %) than for youth not reporting such exposure (13.2 %).	SAMSHA Results from the 2005 National Survey on Drug Use and Health: National Findings.	NA	

6. The percentage of students ages 12-17 who are not current smokers.

Data	*Sources*	*Updated*	*Source*
Local: Indicator was not included in previous Assessment. ***In 2006-07,*** 97% of 7th graders, 89% of 9th graders and 84% of 11th graders are not current smokers. Daily use was reported as 0% for 7th graders, 3% for 9th graders and 5% for 11th graders	CHKS, Sonoma County 2006-07.	***Local:*** In 2007-09, 97% of 7th graders, 89% of 9th graders and 84% of 11th graders are not current smokers. Daily use was reported as 0% for 7th graders, 3% for 9th graders and 5% for 11th graders.	CHKS, Sonoma County 2007-09.
		State: 95% of 7th graders, 91% of 9th graders and 87% of 11th graders are not current smokers.	CHKS, California 2007-09
		National: 26.0% of students had reported current cigarette use, current smokeless tobacco use, or current cigar use.	2009 YRBSS

Perinatal Alcohol, Tobacco and Other Drug Use

1. Percentage of pregnant women in Sonoma County screened by perinatal providers for alcohol, drug and tobacco use during current pregnancy.

Data	*Sources*	*Updated*	*Source*
Local: A total of 46% of pregnant women screened in Sonoma County. DFB Screened 17% of pregnant women in Sonoma County in 2006. Kaiser Permanente screens all women in their care or 29% of women.	Drug Free Babies Data 2006, County of Sonoma Data on 2006 Births by Hospital, Kaiser Permanente Data.	***Local:*** Percent of pregnant women screened using the Drug Free Babies tool: 2007, 27%; 2008, 29%; 2009, 27%. In 2010 the percent is expected to be higher as one additional clinic is regularly submitting screening data. Kaiser Permanent screens all women in their care or approximately 30% of Sonoma County's pregnant women.	Drug Free Babies
State: n/a		***State:*** No statewide screening data currently exists.	
National: n/a		***National:*** No national screening data currently exists.	

2. Percentage of women in Sonoma County who report alcohol, drug and tobacco use during current pregnancy at screening.

Data	*Source*	*Updated*	*Source*
Local: DFB reports 26% of women screened self-report using any substance (alcohol, other drug, tobacco) during pregnancy in 2006. Ten percent of women screened (10%) report using a substance exclusive of tobacco. Kaiser Permanente reports	Drug Free Babies Data 2006, Kaiser Permanente Data 2006.	***Local:*** Percent of use for those pregnant women who disclosed use during current pregnancy by substance between 2007 and 2009 Tobacco 11.1% – 12.8% Marijuana 5.4% -6.5% Alcohol 4.2% – 6.83%	Drug Free Babies Note – This does not include data from Kaiser.

Data	*Source*	*Updated*	*Source*
that 29% of women screened self-report using any substance (alcohol, other drug, tobacco) during pregnancy in 2006.		Illicit Drugs 2.7% – 4.8%	
State: Vega Study reports 14% of California women use a substance exclusive of tobacco in 1992.	Vega Study 1992.	***State:*** The Vega Study has not been duplicated. 11.9% of California women with a hospitalization for labor and delivery also had a diagnosis of substance abuse (excluding tobacco) by the physician and recorded on the delivery chart.	2006-2008 Office of Statewide Health Planning and Development, Patient Discharge Data
National: Of pregnant women ages 15 to 44, 11% reported alcohol use in past month and 4.5% reported illicit drug use in the past month in 2004.	NSDUH Report 2004.	***National:*** Of pregnant women ages 15 to 44, 10.0% reported alcohol use and 4.5% reported illicit drug use in the past month in 2009. 15.3% reported cigarette use during the past month.	Results from the 2009 National Survey on Drug Use and Health: Volume I, Summary of National Findings.

3. Percentage of pregnant women in Sonoma County with positive screening who meet the criteria for admission to treatment and successfully complete a treatment plan or leave treatment early with satisfactory progress.

Data	*Source*	*Updated*	*Source*
Local: Between 2000 and 2005, 37% of pregnant women who entered treatment in Sonoma County completed treatment or left with satisfactory progress.	California Alcohol and Drug Data System Data for Sonoma County 2000-2005.	***Local:*** Between 2006 and 2009, the following percentages of pregnant women who entered treatment in Sonoma County completed treatment or left with satisfactory treatment: 2006 – 46%; 2007 – 62%; 2008 – 63%; 2009 –	Sonoma Web Infrastructure for Treatment Services (SWITS) Data Set

Data	*Source*	*Updated*	*Source*
		51%	
State: Between 2000 and 2005, 37% of pregnant women in California who entered treatment completed treatment or left with satisfactory progress.	California Alcohol and Drug Data System Data for Sonoma County 2000-2005.	***State:*** In 2006, 35.9% of pregnant women in CA who entered treatment completed treatment. In 2007, 34.4% of pregnant women in California who entered treatment completed treatment.	Treatment Episode Data Set (TEDS) Office of Applied Studies, Substance Abuse and Mental Health Services Administration
National: n/a		***National:*** In 2006, 37.3% of pregnant women nationally who entered treatment completed treatment. In 2007, 35.0% of pregnant women nationally who entered treatment completed treatment.	Treatment Episode Data Set (TEDS) Office of Applied Studies, Substance Abuse and Mental Health Services Administration

4. Percentage of babies born in Sonoma County with positive toxicology.

Data	*Source*	*Updated*	*Source*
Local: n/a	Data to be developed.	***Local:*** The Department of Health Services and the Substance Exposed Newborn Work Group are both requesting that hospitals adopt the policies and practices that will allow this data to be collected and reported.	
State: n/a		***State:*** No statewide data currently exists.	
National: n/a		***National:*** No national data currently exists.	

5. Number of publicly funded treatment beds and day treatment slots in Sonoma County available to pregnant women and their children.

Data	*Source*	*Updated*	*Source*
Local: There are 20 funded residential beds at two facilities, which allow children to be in residence. There are 33 slots in perinatal day treatment.	Data gathered by DFB Project.	***Local:*** Between FY 06-07 and 10-11, there have been between 16 and 22 residential beds at two facilities. There have been a range of 17 to 26 slots in perinatal day treatment. Some of these beds/slots have specific criteria, which must be met to utilize the funding.	DHS, AODS contract budget spreadsheet (FYs 2006-07 to 20v10-11)
		State: N/A	
National: n/a		***National:*** N/A	

Appendix II: Glossary of Terms

General Terms

Individual Education Plan (IEP): The mandate for an Individualized Education Program or IEP is found in the Individuals with Disabilities Education Act (IDEA). Public schools must have an IEP for students with disabilities who meet the federal and state requirements for special education. The IEP is a written document that constitutes the plan for the child's education program, as well as the education program itself.

Children's Oral Health

Caries: The condition of having decay – treated or untreated – in the teeth.

Early Childhood Caries (ECC): Also known as baby bottle tooth decay, ECC is a serious condition affecting infants and young children, which can cause massive decay of primary teeth. If untreated, it can also result in destruction of permanent teeth.

Child Health and Disability Prevention (CHDP) Program: CHDP is a preventive health program serving California's low-income children with periodic preventive health assessments. Children who are suspected of having serious health problems are referred for diagnosis and treatment.

Childhood Obesity, Nutrition, and Fitness

Body Mass Index: Body mass index (BMI) is a measure of weight in relation to height that is used to determine weight status and overweight. BMI is the most widely accepted method used to screen for overweight in children because it is relatively easy to obtain the measurements needed to calculate BMI, measurements are non-invasive, and BMI correlates with body fatness. The Centers for Disease Control (CDC) and the American Academy of Pediatrics (AAP) recommend the use of BMI to screen for overweight in children beginning at 2-years old.

Built Environment: The built environment refers to the manmade surroundings that provide the setting for human activity. It encompasses all buildings, spaces and products that are created, or

modified, by people. It includes homes, schools, workplaces, parks and recreation areas, greenways, business areas and transportation systems. It includes land-use planning and policies that impact our communities in urban, rural and suburban areas.

California Food Policy Advocates: This is a public policy and advocacy organization whose mission is to improve the health and well-being of low-income Californians by increasing their access to nutritious and affordable food.

California SB 19: In response to the child obesity epidemic, the California legislature passed Senate Bill 19, titled the *Pupil Nutrition, Health and Achievement Act of 2001*. SB 19 sets nutritional standards for foods sold outside the federal meal program in elementary schools, and provides pilot program grants to schools to pay for the cost in developing and adopting this policy.

California SB 12: This follow-up bill strengthens and implements the food standards set in SB 19, and expands them to all public schools with students in kindergarten to 12th grade (K-12).

California SB 965: This bill expands the language that currently describes the type of beverages that can be sold in elementary and middle schools to include all K-12 students (including high schools).

Child Nutrition and WIC Reauthorization Act of 2004: The U.S. Congress established a new requirement that all school districts with a federally funded school meals program develop and implement wellness policies that address nutrition and physical activity by the start of the 2006-2007 school year.

Food Insecurity: Limited or uncertain access to nutritious, safe foods necessary to lead a healthy lifestyle. Households that experience food insecurity have reduced quality or variety of meals and may have irregular food intake.

Youth Alcohol, Drug and Tobacco Use

Alcohol and Other Drugs (AOD): A term that notes the definition of alcohol as a type of drug, due to its connection with addiction and related health problems.

Adolescent: Adolescence begins when physiologically normal puberty starts. This period of development corresponds roughly to the period between the ages of 10 and 19 years.

Alcohol addiction, alcohol dependence, or alcoholism: A chronic disease characterized by a strong craving for alcohol, a constant or periodic reliance on use of alcohol despite adverse consequences, the inability to limit drinking, physical illness when drinking is stopped, and the need for increasing amounts of alcohol to feel its effects.

Binge drinking: Binge drinking is defined as having five or more drinks on one occasion in the past month.

California Healthy Kids Survey (CHKS): The California Department of Education sponsors the CHKS, which is a comprehensive youth risk behavior and resilience data collection service available to all California local education agencies. It was administered in Sonoma County schools for the first time during the 1999-2000 school year.

Minor Consent Drug Medi-Cal Program: A minor who is 12 years of age or older may consent to confidential medical care and counseling relating to the diagnosis and treatment of a drug or alcohol related problem. Eligibility is not based on family income. Services are limited and eligibility is required monthly.

Resiliency: Resiliency in youth is defined as the ability to overcome obstacles, to meet the social demands of adolescence, and to build the competencies necessary for success as adults.

Shoulder tapping: Shoulder tapping refers to the practice used by minors to obtain alcohol from strangers near off-sale retail outlets.

National Youth Risk Behavior Survey (YRBS): The national YRBS monitors priority health risk behaviors that contribute to the leading causes of death, disability, and social problems among youth and adults in the United States. The national YRBS is conducted every two years during the spring semester and provides data representative of 9th through 12th grade students in public and private schools throughout the United States.

Perinatal Substance Use – Alcohol, Tobacco and Other Drugs

Fetal Alcohol Syndrome (FAS): This term refers to certain birth defects, and serious, life-long mental and emotional impairments that may be suffered by a child as the result of heavy alcohol consumption by its mother during pregnancy. Symptoms of mental and emotional deficits may include significant learning and behavioral disorders (including attention deficits and hyperactivity), poor social judgment, diminished cause-and-effect thinking, and impulsive behaviors. FAS characteristics include dysmorphic facial features, prenatal and postnatal growth abnormalities, mental retardation, microcephaly and behavioral abnormalities.

Fetal Alcohol Spectrum Disorder (FASD): An umbrella term describing the range of effects that can occur in an individual whose mother drank alcohol during pregnancy. These effects can include physical, mental, behavioral, and learning disabilities with possible lifelong implications. The term FASD is not intended for use as a clinical diagnosis.

Fetal Alcohol Effect (FAE): A term used to describe children who lack the full complement of FAS diagnostic criteria, but demonstrate a variety of conditions thought to be secondary to alcohol exposure in the uterus (including growth deficiency, behavioral mannerisms, and delays in motor and speech performance). Now obsolete terminology, replaced with alcohol-related neurodevelopmental disorder (ARND) and alcohol-related birth defects (ARBD).

Maternal Alcohol, Tobacco and Illegal Drugs (MATID): A term used to describe maternal use of alcohol, tobacco and illegal drugs during pregnancy that threatens the well-being of the child.

Sudden Infant Death Syndrome (SIDS): Unexplained, sudden death of an infant up to one year of age.

Appendix III: Resources

Description of Resources, Coalitions, Initiatives

Resources, Coalitions and Initiatives	***Description***	**Dental**	**Fitness**	**Teens**	**Perinatal**
California Healthy Kids Survey	Provides schools, districts, counties, and the state with a standard tool that promotes the collection of uniform data within and across local education agencies that are also comparable to existing state and national survey datasets.		X	X	
California Schools Boards Association – Building Health Communities	An effort to support and encourage school board members and educators to take a leadership role in developing community approaches to addressing the health and well-being of students.	X	X	X	
The Children's Power Play! Campaign	**The *Children's Power Play! Campaign*** encourages 9-11 year-olds and their families to eat more fruits and vegetables and get 60 minutes of physical activity every day.		X		

Resources, Coalitions and Initiatives	*Description*	Dental	Fitness	Teens	Perinatal
Clean and Sober School Program	A voluntary program of the Sonoma County Office of Education, Youth Development, Support and Leadership Department, providing a safe and supportive environment free of negative peer influence for students in grades 9–12.			X	
Cloverdale Coalition to Reduce Underage Drinking	New coalition in Cloverdale to promote a social host ordinance.			X	
Community Activity & Nutrition Coalition (CAN-C)	Promotes nutritional and physical health through community engagement, partnerships, advocacy, and leveraging resources; coordinates Healthy Students Initiative and the Healthy Eating Active Living (HEAL) initiative.	X	X	X	
The Drug Abuse Alternatives Center (DAAC)	Provides teen services including outpatient drug-free treatment and school-based services, outreach, education and prevention efforts, assessment, individual, and family, and group counseling. Also provides Perinatal AOD day treatment services.			X	X
Drug Free Babies Program	A collaborative case management program for pregnant and delivering women with perinatal medical providers and treatment providers. Drug Free Babies is designed to reduce the negative impact of prenatal tobacco, alcohol and other drug exposure.				X
Family Recovery Project	A collaboration designed to improve the coordination among the Child Welfare, Alcohol and Other Drug, and Probation Systems to streamline services for families and youth with substance use problems involved in child welfare and probation.			X	X
First 5 Sonoma County	Invests in Sonoma County's youngest children by funding programs and services that promote, support, and improve the early development of children from the prenatal stage through age five.	X	X		X
Friday Night Live	Local Friday Night Live (FNL) chapters implement youth-led environmental prevention strategies to reduce underage drinking use and related problems in Sonoma County.			X	

Resources, Coalitions and Initiatives	*Description*	Dental	Fitness	Teens	Perinatal
Grupo Activo (South Santa Rosa)	Since early 2009, residents in Roseland have organized and advocated for more trails and opportunities for safe physical activity.		X		
Healthy Eating, Active Living Community Health Initiative (HEAL)	Funded by Kaiser Permanente Northern California Region, to empower communities with the capacity to support healthy eating and active living.	X	X		
Health Action	Convened in 2007, to improve the health of Sonoma County residents by mobilizing community resources to focus on selected priorities for action.	X	X		
Health Action - Healthy Students Initiative, Healthy for Life	A project of Health Action to implement solutions to address childhood obesity in Sonoma County school communities.		X		
Health Action – iCare	Improving the well-being of the community and transforming the patient experience through accessible, coordinated, and compassionate health care for all people, iCARE is a movement to improve primary care practices to make primary care more reliable and easier to access, and for the medical care provided to be centered around each patient.	X	X	X	X
Health Action - iGrow	Provides links to local resources in Sonoma County that support growing healthy food and sharing information, skills and produce.	X	X		
Health Action - iWalk	A campaign to increase the number of people who walk regularly in Sonoma County.		X		
Health Action - Safe Routes to School(SRTS) Workgroup	Engages in comprehensive program planning and sustainable fund development for a countywide SRTS program.		X		
Health Action - Sonoma County Food System Alliance (FSA)	Brings together diverse stakeholders to assess the local food system needs and identify opportunities for collective action.	X	X	X	
Health Centers					
	Alexander Valley Regional Medical Center	X	X	X	
	Alliance Medical Center	X	X		
	Elsie Allen Health Center		X	X	

Resources, Coalitions and Initiatives	*Description*	Dental	Fitness	Teens	Perinatal
	Jewish Community Free Clinic		X		
	Occidental Area Health Center		X		
	Petaluma Health Center	X	X	X	X
	Roseland Children's Health Center		X		
	Russian River Health Center	X	X	X	X
	Santa Rosa Community Health Center		X	X	X
	Sebastopol Community Health Center		X	X	
	Sonoma Valley Community Health Center	X	X	X	X
	South West Community Health Center		X	X	X
	Vista Family Health Center		X	X	X
Healthy By Design	Launched in 2007, focuses on creating healthier communities through the use of health-focused goals in land use and transportation planning, community development and building practices.		X		
Healthy Sonoma	A source of non-biased data and information about community health in Sonoma County, and healthy communities in general.		X		
Kaiser Early Start Program	Kaiser screens all pregnant women and provides follow up care and referrals to treatment.				X
Kaiser Permanente	An online tutorial for working with children and their families on the subject of pediatric weight management.		X		
Megan Furth Harvest Pantry	Combats childhood anemia and obesity among low-income children in Sonoma County with a mobile "farmer's market."		X		
Mighty Mouth	A school-based children's dental program to help prevent dental disease. The program also includes school-based dental screening, fluoride varnish, dental sealants and treatment.	X			
Mommy and Me	A program of St. Joseph Health System that provides bilingual and bicultural oral health education classes and periodontal therapy to low-income pregnant women who later return with their babies for the first birthday, first visit exam.				

Resources, Coalitions and Initiatives	*Description*	Dental	Fitness	Teens	Perinatal
Network for a Healthy California – North Coast Region	Partners with schools, food outlets, and public and private agencies to promote healthy eating and physical activity, and provides nutrition education.		X		
North Bay Children's Center	Provides school garden-based nutrition education for young children in the Petaluma area. Early Childhood Nutrition Education Toolkit available.		X		
Northern California Center for Well-Being	Raising Healthy Active Kids, formed in 2007, educates families on ways to prevent childhood obesity and overweight. The program trains Promotores. The Smoke Free Babies program offers individual counseling for pregnant or recently delivered women with reducing and quitting smoking and creating a smoke-free environment for their families.		X		X
Parent Project/Padres Unidos	A parent training program for parents with difficult or out of control children and teenagers. Padres Unidos provides a similar training program for monolingual Latino parents of high-risk youth.			X	
Pediatric Dental Initiative (PDI) Surgery Center	A non profit service that provides oral surgery for low-income children and people with disabilities, case management and community education.		X		
Petaluma Coalition to Prevent Alcohol, Tobacco and Other Drug Problems	A local community group working to reduce problems associated with underage and high risk drinking, implementing a Parent/Community Pledge campaign, facilitating passage of a Social Host Ordinance (SHO), and collaborating to pass an Alcohol Beverage Sales (ABS) Ordinance.			X	
Project Alert	Offers research-based AOD prevention and intervention programs for middle school students, adopted by 18 school districts in the county.			X	

Resources, Coalitions and Initiatives	***Description***	**Dental**	**Fitness**	**Teens**	**Perinatal**
Project SUCCESS	Project Success (Schools Using Coordinated Community Efforts to Strengthen Students) is a program working to prevent and reduce substance abuse among high school adolescents, 14-18 years of age, by placing highly trained professionals in schools to provide a full range of substance use prevention and early intervention services. Project Success is currently implemented at ten high schools in five Sonoma County school districts.			X	
R House	A leader in adolescent AOD treatment, including residential treatment, relapse prevention, school programs,			X	
Raising Healthy Active Kids	A program that disseminates widely highly practical, culturally appropriate and effective nutrition and physical activity educational curriculum and resources directly to families at highest risk, and provides training and focused support to the broad array of individuals who exert influence on young families.		X		
Redwood Community Health Coalition (RCHC)	Community health centers throughout Sonoma County are training staff to conduct routine BMI screenings and monitoring of children's nutrition and weight.	X	X	X	X
Safe Kids Sonoma County	Safe Kids connects parents and caregivers with the safety resources they need.		X		
Salmon Creek School Lunch Transformation (Salmon Creek Occidental/Freestone)	Harmony Union School District in West Sonoma County developed a wellness policy to encourage healthier food. They use seasonal produce from the one-acre organic school garden and local farms, and eliminated from the menu any products with high fructose corn syrup.		X		
Santa Rosa City Schools Nutrition Services	Provides nutrition education and information resources to students and parents as well as lesson plans for teachers.		X		
Save Our Smiles	Identifies and promotes best practices in prevention and early detection of childhood caries by means of the Sonoma County Oral Health Access Coalition advocacy, prevention and community activities.	X			

Resources, Coalitions and Initiatives	*Description*	Dental	Fitness	Teens	Perinatal
School Garden Network	Supports and promotes sustainable garden- and nutrition-based learning programs in Sonoma County schools, and connects school communities with fresh, locally grown foods.		X		
School Garden Teacher Training and Support Program	A residential summer training at the Occidental Arts and Ecology Center focused on the instructional school garden and its integration into multiple subject areas.		X		
School Nutrition and Fitness	A comprehensive interactive set of customizable web pages developed specifically for School Food and Nutrition Departments, designed to help promote healthy habits to students.		X		
School Wellness Policy	Federal law requires all school districts with federally funded meals programs to develop and implement policies that address nutrition and physical activity. All 40 Sonoma County school districts are in compliance with law.		X		
Sonoma County Alcohol and Other Drug Prevention	Works in concert with local community based organizations, community partners, and government agencies to promote a Healthy Sonoma.org County.			X	
Sonoma County Breastfeeding Coalition	Formed in 1996, to educate and empower women to breastfeed and increase public awareness of the value of breastfeeding.		X		
Sonoma County Maternal Child and Adolesecent Health	Promotes the physical, social and emotional health of childbearing women, children, adolescents and their families in Sonoma County to assure healthy babies are born to healthy mothers, end of health disparities, equal access to services.		X	X	X
Sonoma County Oral Health Access Coalition (SCOHAC)	Developing a sustainable collaborative community system to improve the quality and access of oral health care for all people of Sonoma County.	X			

Resources, Coalitions and Initiatives	*Description*	Dental	Fitness	Teens	Perinatal
Sonoma County Perinatal Alcohol and Other Drug (AOD) Action Team	An interdisciplinary group of health care, human services and treatment professionals dedicated to helping babies achieve the healthiest start in life. has been working since 2003 to reduce perinatal exposure to tobacco, alcohol, and other drugs through a sustainable system of care, known as the Perinatal ATOD System of Care. Drug Free Babies and Smoke Free Babies are two programs within the system of care.			X	X
Sonoma County Peer Outreach Coalition	Founded in 2010, the Peer Outreach Coalition is committed to positively impacting the lives of Sonoma County youth by reaching out to Sonoma County youth through social media and community outreach. The Peer Outreach Coalition works within the Community Action Partnership of Sonoma County.			X	
Sonoma County Prevention Partnership	The Prevention Partnership is a countywide coalition focused on developing population strategies to address tobacco, alcohol and other drugs through local advocacy and policy. The partnership collaborates with community partners to create healthy communities for Sonoma County residents.			X	
Sonoma County Regional Parks District's Healthy Earth Healthy Bodies	The Park District developed a field trip program that combines science and health education to weave together the importance of protecting the earth's resources and growing healthy bodies.		X		
Sonoma Valley Coalition to Prevent Underage Drinking	The coalition's focus is on Environmental Prevention, the Social Host Ordinance and the Parent and Community Pledge.			X	
Substance Exposed Newborn Work Group	Comprised of representatives from Child Welfare, Public Health, Alcohol and Other Drug Services, and foster parents to discuss county approaches to ensuring child safety and providing services for newborns who may have been exposed to substances in utero.				X
Support Healthy Active Kids in Education (SHAKE)	Formed in 2008, to use elementary school-based programming to promote childhood health and fitness among students of the Petaluma City Schools District.		X		

Resources, Coalitions and Initiatives	*Description*	Dental	Fitness	Teens	Perinatal
West County Coalition for Alcohol and Drug-Free Youth	A group of West County parents, educators, law enforcement officers, health professionals, and other community members committed to reducing the problems associated with teen use of alcohol.			X	
Women Infants and Children (WIC) program	WIC is a nutritional program that provides pregnant women, new mothers and young children (up to age 5) with food vouchers and nutritional counseling about eating well and staying healthy. Sonoma County has three WIC programs.		X		X
Youth Risk Behavior Surveillance System	Monitors priority health-risk behaviors and the prevalence of obesity and asthma among youth and young using a national school-based survey conducted by the Centers for Disease Control and Prevention.		X	X	

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St. Joseph Health

http://www.stjhs.org/

St. Joseph Health (SJH) is an integrated healthcare delivery system providing a broad range of medical services. The system is organized into three regions--Northern California, Southern California, and West Texas/Eastern New Mexico - and consists of 14 acute care hospitals, as well as home health agencies, hospice care, outpatient services, skilled nursing facilities, community clinics, and physician organizations. The ministries that comprise SJH offer a wide variety of services within each of the three regions. From well-established acute care hospitals to clinics in non-traditional settings like school rooms, SJH is establishing a "continuum of care," that is, a system that links and coordinates an entire spectrum of health services.