

HEALTH

Santa Cruz County

2015



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4. <http://www.santacruzca.org/misc/about-santa-cruz-county.php>
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LETTER FROM THE HEALTH OFFICER

The past century has seen amazing increases in both life expectancy and health-related quality of life in the United States. Many major causes are well known, such as improved sanitation and hygiene, immunizations, antibiotics, chlorination of drinking water, refrigeration of food, pasteurization, and fluoridation of drinking water. As recently as 1900, infectious diseases were responsible for the bulk of human deaths (as they still are, in the developing world); nowadays, with infectious diseases substantially controlled, most Americans live to a ripe old age, and the major causes of death are the diseases of aging — cancer and heart disease. And our ripe old age is far more likely than in the past to include better physical mobility, less pain, and even our own teeth. But, if we don't get adequate exercise and eat a healthy diet, there's a greater chance that our old age will be marked by diseases such as diabetes and arthritis that can severely impair the quality of life.

Santa Cruz County residents are blessed, primarily through our own choices, with better health in many respects than other Californians and other Americans. We don't smoke as much, we exercise more, and we eat a healthier diet than many Americans. As a result, we have lower rates of heart disease, diabetes, lung cancer, and chronic lower pulmonary disease. We also have relatively low rates of tuberculosis, HIV/AIDS, sexually transmitted diseases, teen births, and homicide. On the other hand, we have elevated rates of Alzheimer's disease, suicides, and drug-related deaths; and, while our obesity and diabetes and STD rates may be relatively low, they are climbing dramatically here as well as elsewhere. While teen birth rates continue to plummet, both here and nationwide, they remain far higher than in almost all other developed countries, indicating that there is still plenty of room for improvement.

The Public Health Division of the Santa Cruz Health Services Agency is in the initial stages of applying for Public Health Accreditation. Public Health Accreditation is the measurement of health department performance against a set of nationally recognized, evidenced-based standards. Accreditation will help us to remain current on public health practice, enhance our reputation with the community, and provide us with an opportunity to identify areas where quality improvement is needed. It will also facilitate Public Health to achieve greater efficiency and effectiveness at a time when local health departments are being asked to do more with less.

Multiple assessments and plans must be completed before we can apply for accreditation. This Health Profile is designed to complement and support this process. It is part of the Community Health Assessment (CHA), which is an essential component of the first phase of the accreditation. The CHA will identify our top health priority areas and will be performed with community involvement. This report addresses many important topics, but it is not intended to be comprehensive of all aspects of health; the CHA will provide that greater breadth and depth, including a much more thorough examination of the socioeconomic determinants of health and the health disparities that stem from them. This report is a snapshot of where we stand today — along with some “movies” showing where the trends are taking us.

I am very excited about accreditation and the positive changes that will arise from the process. We live in a beautiful and engaged community with a health department that is effective and involved. I anticipate that our community and the services we provide will evolve through the process.

I wish to acknowledge and thank the County Board of Supervisors, CAO Susan Mauriello, Health Services Agency Director Giang Nguyen, and the staff of the Agency for their interest and unwavering support.

Respectfully,

A handwritten signature in black ink, appearing to read 'Lisa B. Hernandez', with a stylized flourish at the end.

Lisa B. Hernandez, MD, MPH
Health Officer, County of Santa Cruz

EXECUTIVE SUMMARY

This Executive Summary provides an overview of the Santa Cruz County health and wellness data as detailed in the following report. The report, is intended to inform local public health stakeholders including hospitals, safety net clinics, other county departments, schools, government agencies, community based organizations, advocacy groups, health coalitions, business, and the public, on the state of and risks to the community's health and further engage these partners in ongoing efforts to encourage healthful behaviors.

SUMMARY OF FOCUSED HEALTH ISSUES

Santa Cruz County holds among its many health promoting strengths an exceptional natural environment, clean air and water, a highly educated workforce, high average income, and an engaged citizenry. Taken as a whole, the county's health reflects these advantages, and by many of the most important health measures, the county compares favorably to the rest of the state and the nation. The smoking rate is among the lowest in the nation. The obesity rate is among the lowest in the state, perhaps as a result of being one of the state's most physically active counties. Low rates of lung cancer, heart disease, and diabetes reflect those healthy lifestyle choices. County residents report relatively few days of poor physical health per year. The rates of sexually transmitted diseases, HIV/AIDS, and tuberculosis are far better than statewide rates. Teen birth, low birthweight, breastfeeding, and infant mortality rates are all better than the national average.

The report evaluates key health indicators and presents a number of areas worthy of recognition for the progress made in improving community health. HSA will continue to devote resources to build upon this progress. The following are areas of notable good health:

Smoking is the leading cause of death in the developed world. Santa Cruz County and California residents smoke less than the U.S. population. For the last decade, Santa Cruz County adult current smoking rates have usually been lower than state rates and have varied around the Healthy People 2020 goal of less than 12%. Ten percent (10.1%) of adults in Santa Cruz County were current smokers, compared to 12.9% of Californians based on data collected between 2006 and 2012.

Many adult smokers are introduced to tobacco as adolescents, leading to a lifetime of exposure to chemicals that can cause cancer, heart disease, and lung disease not only for the smoker but for those around them as well. The prevalence of smoking among adolescents in the Central Coast Region mirrors statewide rates. California rates fluctuated between 13.0% and 16.0% for 2002 through 2010 before dropping to 10.5% in 2012.

Possibly the fastest-growing nicotine threat in the US is electronic cigarettes, electronic devices that vaporize nicotine and other chemicals for inhalation. Current e-cigarette use among middle and high school students tripled from 2013 to 2014, according to data published by the Centers for Disease Control and Prevention and the U.S. Food and Drug Administration.

Despite the proven benefits of **physical activity**, in 2013 only 49.9% of American adults met the CDC Physical Activity Guidelines. However, in 2012, the percentage of Santa Cruz County adults who did not engage in any leisure-time physical activity was estimated at just 11.4%, second lowest of all California counties and eighth best out of 3,146 counties nationwide.

Physical activity is a key factor for children and adolescents to maintain a healthy weight and develop healthy habits that will help prevent chronic disease as they age. A Healthy People 2020 goal is to increase to 20.2% the proportion of adolescents who meet CDC's physical activity guidelines for aerobic physical activity of 60 minutes per day. In 2011-12, 16.1% of California teens reported at least 60 minutes of physical activity seven days a week, excluding Physical Education; Santa Cruz County reported 28.7% of teens meeting the CDC guidelines.

EXECUTIVE SUMMARY

In 2011, the U.S. Surgeon General released a “Call to Action to Support **Breastfeeding**,” stating that everyone can facilitate breastfeeding. The CDC estimates 79% of U.S. mothers breastfeed at birth, while only 17% exclusively breastfeed six months later. County-level breastfeeding data is only collected in the hospital, usually within 24-48 hours following birth, so it is unknown how long breastfeeding continues after hospital discharge in Santa Cruz County. In 2013, 98.1% of infants residing in Santa Cruz County were given at least some breast milk while hospitalized, compared to 93.0% statewide. The Healthy People 2020 objective is 81.9%; therefore, both the county and the state have surpassed the national goal. Differences by ethnicity can be seen locally and statewide; however, the gap is narrowing, with more Latino infants being fed human milk only.

Based on the data, four categories of population health warrant improvement:

Suicide is the 10th leading cause of death nationally, taking the lives of over 41,000 Americans in 2013 – almost 1.6% of all deaths in the United States, and 2.5 times as many deaths as homicide. For the years 2011-13, the age-adjusted rate of death by suicide in Santa Cruz County was 13.7 per 100,000 persons, compared to the statewide rate of 10.2 and the 2013 national rate of 12.6; Santa Cruz ranked 34th out of 58 California counties. For many years, county rates of **death from suicide and drug-induced injury** have generally been higher than state rates. The 2011-2013 age-adjusted rate of drug-induced death in Santa Cruz County was 18.4 per 100,000 persons, compared to the statewide rate of 11.1.

Teen pregnancy prevention is of paramount importance to the health and quality of life of our youth. In 2013, the U.S. teen birth rate was 26.5 births per 1,000 females ages 15-19. California and Santa Cruz County experienced record lows in 2013, with teen birth rates of 23.2 and 16.6 per 1,000 females ages 15-19, respectively. However, Latina rates in Santa Cruz County were higher than Latina rates statewide, whereas rates among White teens in Santa Cruz County were lower than state rates between 2010 and 2012.

Overweight or **obese individuals** are at greater risk for many major causes of morbidity and mortality: hypertension, coronary heart disease, stroke, type 2 diabetes, asthma, gallbladder disease, arthritis, sleep apnea, and certain cancers. Obesity, in combination with physical inactivity, is now second only to smoking as a cause of death in the United States. Although California had the fourth lowest rate of obesity in the country (24.1%) in 2013, the difference is not very large. The CDC estimated the age-adjusted rate of obesity in Santa Cruz County adults in 2012 as 20.1%, 11th lowest in the state, and 65th lowest in the entire nation.

Overweight children are twice as likely to become obese adults. Childhood obesity rates are exploding nationally. Santa Cruz County and California are not exceptions to the trend. Latino children are especially at risk; in 2013-14, 49% of Santa Cruz County Latino children were not at healthy weight, compared to 24% of white children.

Sexually transmitted infections (STIs) account for the largest number of reported diseases among Santa Cruz County residents. Chlamydia, gonorrhea and syphilis have all increased from 2011-12 to 2013-14 – with gonorrhea increasing 72%. Syphilis has increased every year over the past few years. The director of the CDC's Division of STD Prevention, announced an “epidemic of syphilis” among gay males. This is consistent with Santa Cruz County syphilis data, with the majority of cases (75%) being males who have sex with males.

This report does not discuss homelessness, which poses its own unique health challenges as well as challenges that go far beyond the purview of public health. An improving economy may help to alleviate the problem; the January 2015 homeless census found lower numbers of homeless persons than the prior census. *All In — Toward a Home for Every County Resident* is a county-wide strategic plan that brings together a broad array of stakeholders to plan for new, innovative strategies to address homelessness. The complex problems of substance abuse and behavioral health and their negative effects in Santa Cruz County have been detailed in separate strategic planning documents developed by HSA's Behavioral Health Division. We look forward to continued collaboration with staff and community stakeholders in these areas and others, such as youth violence prevention.

EXECUTIVE SUMMARY

The generally positive picture of Santa Cruz County obscures profound disparities in education, income, and health between the rich and the poor and between Latinos and non-Latino Whites. When asked to rate their general health, Santa Cruz County Hispanics were significantly more likely than non-Latino Whites to rate their health as less than good. That disparity arises repeatedly throughout this report.

NEW FOCUS

The Public Health Division within Santa Cruz County's Health Services Agency recently initiated the process of gaining public health accreditation. The accreditation process is intended to enhance the quality and performance of public health departments. The first phase of the accreditation process involves three components: a Community Health Assessment (CHA), a Community Health Improvement Plan (CHIP), and a health department strategic plan.

Past editions of this report have drawn their structure from the University of Wisconsin's Health Rankings report. While that report is valuable because it focuses on measures for which comparison data is available for nearly every county in the country; this report is less shaped by the Health Rankings report, because accreditation demands a broader and deeper look at the county's health.

The Community Health Assessment will guide us in identifying our top health priority areas and this report will serve as a starting point for the CHA. The CHA will provide that greater breadth and depth, including a much more thorough examination of the socioeconomic determinants of health and the health disparities that stem from them. The CHA will also include extensive community involvement over the course of the next year. The areas highlighted in this report may resonate with the community as we develop the CHA and work toward the CHIP and the health department strategic plan. We anticipate that the health-related quality of life in Santa Cruz County will continue to improve because of the focused efforts of the Health Services Agency and our many community partners.

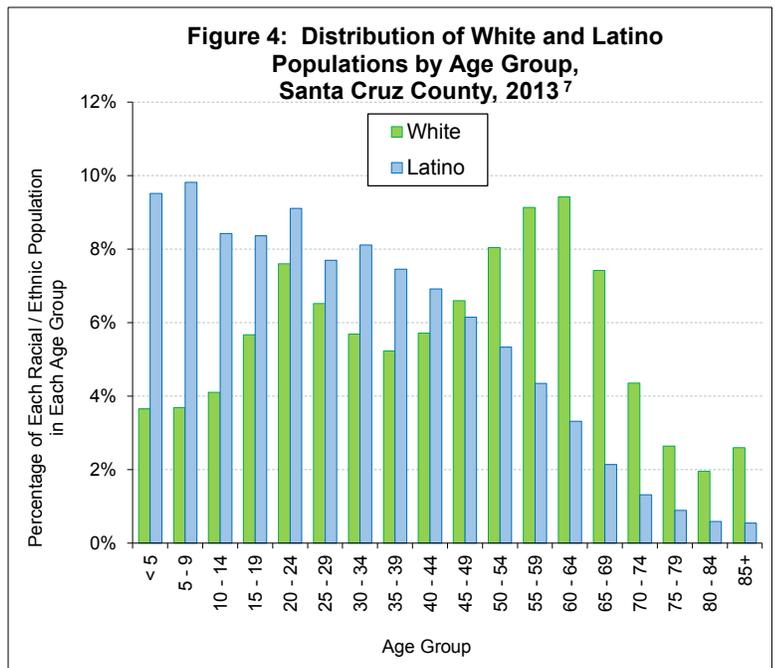
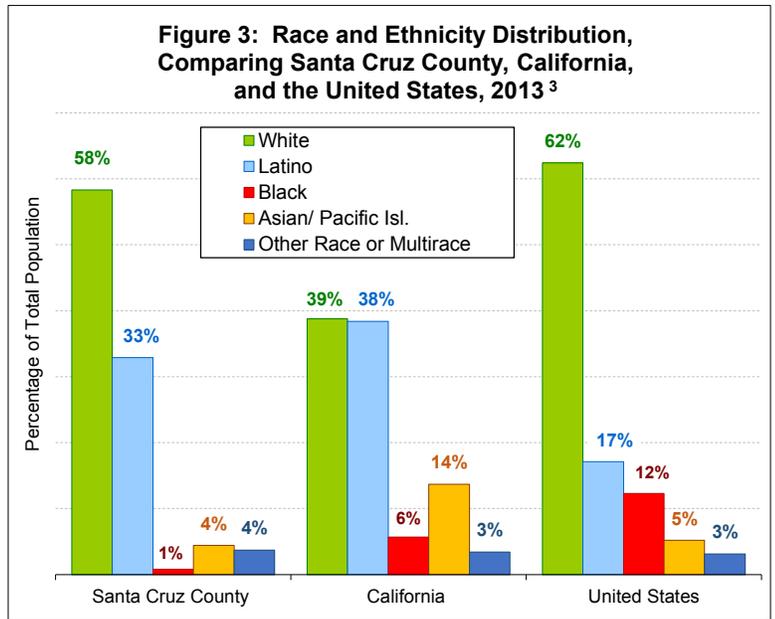
DEMOGRAPHICS

ETHNICITY & RACE

Figure 3 shows the race/ethnicity distribution in 2013 of Santa Cruz County compared to California and the United States. Santa Cruz County's population comprises 58% White, 33% Latino, 4% Asian or Pacific Islander, 1% Black, and 4% other or multiracial.³ Compared to Santa Cruz County, California has a smaller proportion of Whites, larger proportions of Blacks and Asians, and a slightly larger proportion of Latinos. The United States has a slightly higher proportion of Whites, far more Blacks, a much smaller proportion of Latinos, and approximately the same proportion of Asians as Santa Cruz County.

The relative proportions of various racial/ethnic groups in the county have steadily changed in recent decades. In 1970, the county's population was more than 86% White and less than 10% Latino.⁷ By 2013, the Latino population proportion had increased to 33%, while the White proportion had decreased to 58%.³ The proportions of Asians, Blacks, and Native Americans have all increased since 1970, though not as rapidly as the Latino proportion, and they still remain relatively small proportions of the population.

Although 58% of the county's adults (age 18 years or older) are White and only one-third are Latino,⁸ approximately half the births in the county are to Latinas. Children make up a far larger proportion of the Latino population than of the White population, and this difference continues through every age group under 45. Conversely, every age group over 45 contains a larger proportion of the White population than of the Latino population (Figure 4).⁸ The same basic pattern is true statewide.



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SOCIAL DETERMINANTS OF HEALTH

The World Health Organization defines the social determinants of health as the conditions in which people are born, grow, live, work, and age. These circumstances are shaped by the distribution of money, power, and resources at global, national, and local levels (Figure 1).¹ The social determinants of health are mostly responsible for health inequities – the unfair and avoidable differences in health status within and between populations.

EDUCATION

Educational level is strongly correlated with health. There is an inverse relationship between level of education and many risk behaviors. Similarly, there is a positive association between increasing level of education and an increase in health-protective factors such as income level, economic security, and the accumulation of wealth.² Additionally, educational success has been correlated with supportive and enriched childhood development. Therefore, resources and policies that support programs such as Head Start and universal pre-school are a good investment for society.

The U.S. Census Bureau estimated that 85% of Santa Cruz County residents age 25 and older have obtained at least a high school diploma (or equivalent) in the years 2009 through 2013 – compared to 81% statewide and 86% nationwide (Figure 2).³ For the same time period, the Census estimated that 37% of Santa Cruz County residents over age 25 have a bachelor’s degree or higher, compared to 31% across the state, and 29% nationally.

In Santa Cruz County and statewide, Latino students are more likely to drop out of high school than White students (Figure 3).⁴ However, Santa Cruz County drop-out rates by ethnicity are lower than their statewide counterparts; e.g., 11.7% of Latinos dropped out in the 2012/13 school year in Santa Cruz County, compared to 13.9% statewide. Fortunately, the trend over the past few years locally and statewide shows decreasing drop-out rates.

In California, 15.8% of children attend at least 10 hours per week of preschool, nursery school, or Head Start, compared to 11.8% in Santa Cruz County, based on California Health Interview Survey data pooling years 2009-2011/12.⁵ The difference seems to be lower rates among Santa Cruz County Latino children, even with higher rates among Santa Cruz County White children.

Figure 1: World Health Organization's Social Determinants of Health Conceptual Framework¹

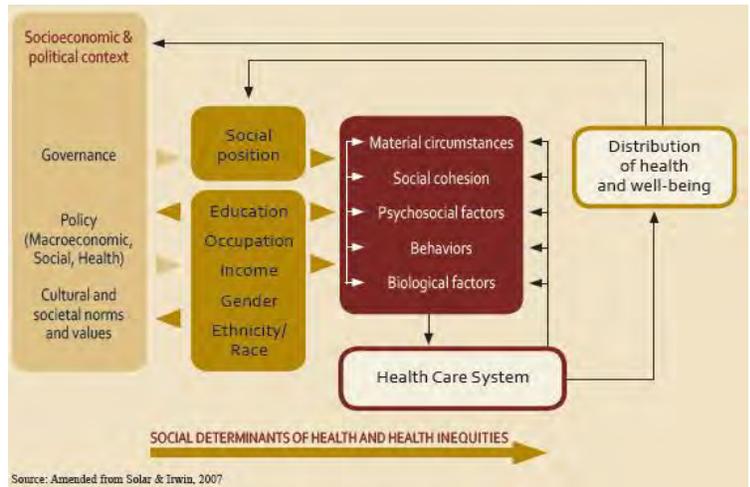


Figure 2: Educational Attainment, Santa Cruz County, California, and the U.S., 2009-2013³

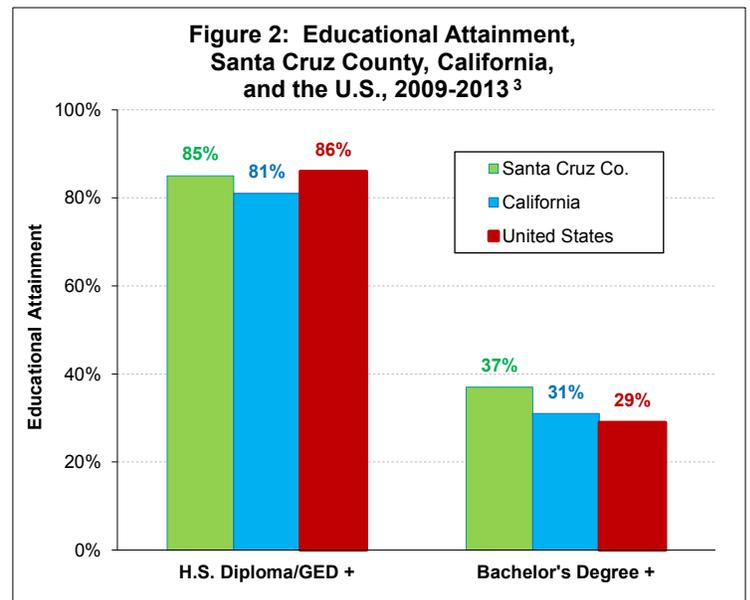
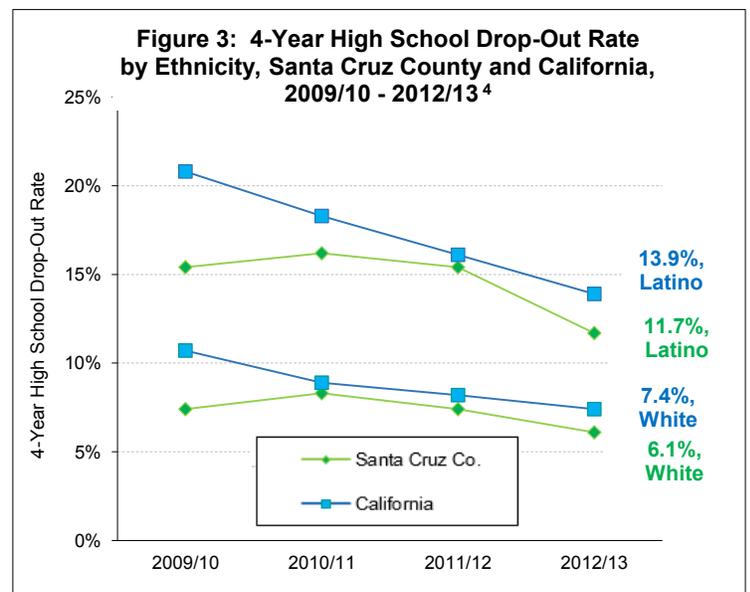


Figure 3: 4-Year High School Drop-Out Rate by Ethnicity, Santa Cruz County and California, 2009/10 - 2012/13⁴



SOCIAL DETERMINANTS OF HEALTH

EMPLOYMENT

The relationship between unemployment and adverse health outcomes is bidirectional, meaning that unemployment contributes to ill health and ill health contributes to unemployment. Santa Cruz County unemployment spiked in 2010, just as it did in California, as a result of the national recession.⁶ Since then, both Santa Cruz County and California have been experiencing decreasing unemployment rates (Figure 4).

In 2014 in Santa Cruz County, there was an average of 142,600 residents in the labor force (persons age 16 and older who are able, available, and actively looking for work, not including the jobless who are not seeking work).⁶ During that year, 12,500 (8.7%) were not employed, compared to 7.5% statewide.

Unemployment data is available at the sub-county level by Census Designated Place (CDP). CDPs are populated areas that lack separate municipal government, but which otherwise physically resemble incorporated places. Many of the highest rates were in the south region of the county (Day Valley, Freedom, and Watsonville, Table 1). The cities of Watsonville and Santa Cruz had the highest sheer numbers of unemployed persons in 2014.⁶

INCOME

Like unemployment, income's impact on health is also bidirectional (i.e., poverty breeds ill health, and ill health keeps people poor). Income allows families and individuals to purchase health insurance and medical care, and also provides options for healthy lifestyle choices.⁷ Poor families are the most likely to live in unsafe homes and neighborhoods, often with limited access to healthy food, employment options, and quality schools.⁷

Santa Cruz County median household income was certainly affected by the recent recession (Figure 5).⁸ However, Santa Cruz County income has remained higher than California and the United States from 2007 to 2013. Another approach to understanding income is focusing on income inequality, or the divide between the poor and the affluent. Inequalities in a community can accentuate differences in social status and serve as a stressor. In Santa Cruz County, the top 20% of income earners make 5.2 times more income than the lowest 20%, compared to 5.1 times more statewide, between 2009 and 2013.⁷

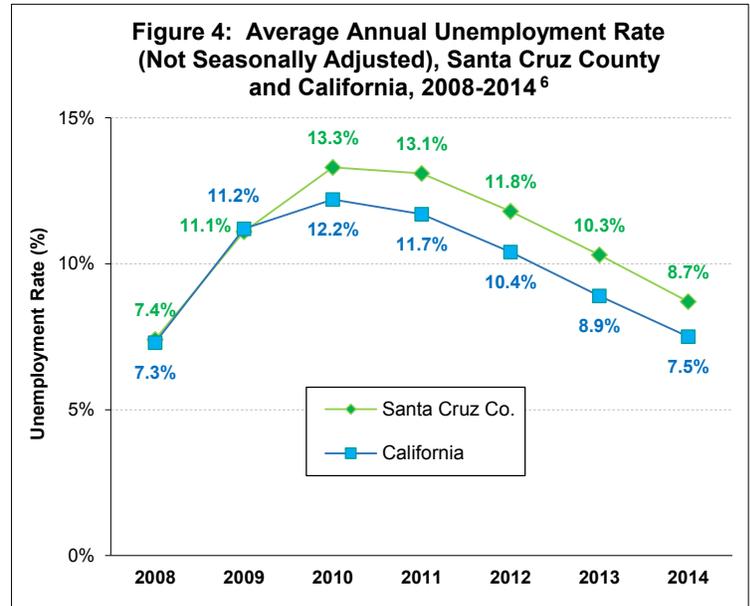
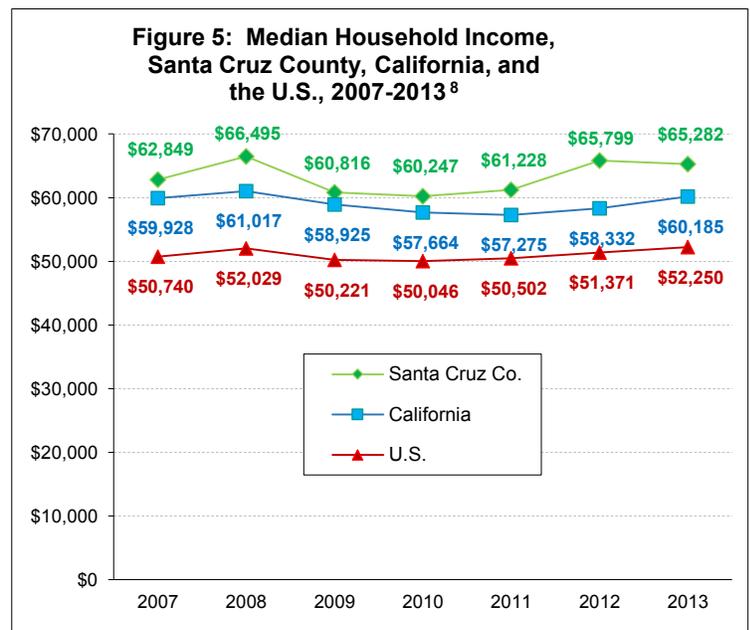


Table 1: Top 10 Cities or Census Designated Places (CDP) with the Highest Unemployment Rates (Not Seasonally Adjusted), Santa Cruz County, 2014⁶

City / CDP	Unemployed Persons	Labor Force	Rate
Twin Lakes	500	3,400	14.8%
Day Valley	300	1,900	14.4%
Freedom	200	1,700	11.4%
Watsonville City	2,800	25,200	11.2%
Boulder Creek	300	3,000	10.9%
Ben Lomond	300	3,500	9.7%
Aptos	300	3,200	8.5%
Scotts Valley	500	6,400	7.9%
Santa Cruz City	2,600	32,800	7.8%
Live Oak	700	9,500	7.8%



SOCIAL DETERMINANTS OF HEALTH

CHILDREN IN POVERTY

The effects of poverty on children’s health and well-being are well documented. Poor children have increased infant mortality, more frequent and severe chronic diseases such as asthma, poorer nutrition and growth, less access to quality health care, lower immunization rates, and increased obesity and its complications.⁹ Children are the poorest segment of society; 22% of U.S. children live below the federal poverty level – a prevalence that appears to be increasing in all geographies (Figure 6). In Santa Cruz County, an estimated 18.9% of children (under age 18) were living in poverty in 2013, which is approximately 10,200 children.⁸

HOMELESSNESS

People who experience homelessness have a mortality rate four times that of the general population.¹⁰ They die decades earlier, often from treatable medical conditions. A one-day homeless count conducted on January 22, 2015 identified 1,964 homeless persons in Santa Cruz County.¹¹ This count was a 44% decrease from the prior census in 2013; virtually all of the reduction came from unsheltered persons. Nearly one-third are sheltered, while the remainder are unsheltered, and the majority of the unsheltered lived on the streets or in a vehicle. Many homeless persons also experience disabling health conditions, primarily drug or alcohol abuse (Figure 7). The homeless population in Santa Cruz County is slightly different from the general population by ethnicity, with Blacks and multi-racial groups experiencing the greatest inequities, e.g., 28% of homeless persons were multi-racial, and 5% were Black, compared to 8% multi-racial and 2% Black countywide.¹¹

VIOLENT CRIME

Violent crimes are offenses that involve face-to-face confrontation between the victim and the perpetrator, including homicide, forcible rape, robbery, and aggravated assault.⁷ High levels of violent crime compromise physical safety and psychological well-being. High crime rates can also deter residents from pursuing healthy behaviors such as exercising outdoors. In Santa Cruz County, overall violent crime numbers dropped from 2009-2011 to 2012-2014 (Table 2).¹² For the latter years, the violent crime rate was 394 in Santa Cruz County, compared to 402 statewide per 100,000 population. The reported number of rapes jumped substantially in 2014 after the F.B.I. broadened the definition of rape.

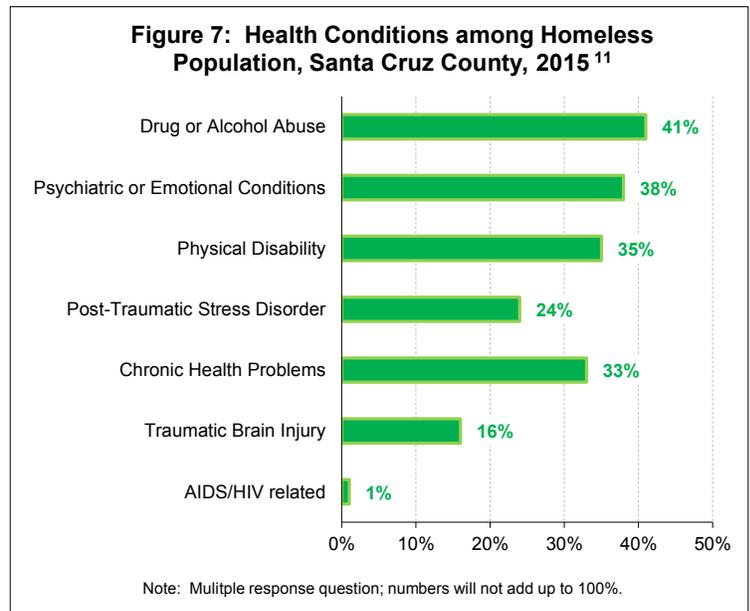
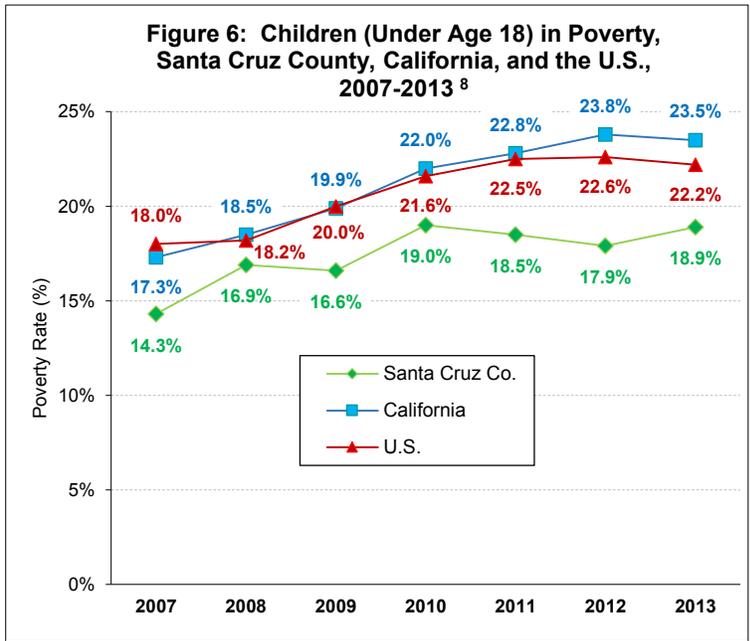


Table 2: Violent Crimes by Type, Santa Cruz County, Annual Average, 2009 - 2014¹²

Crime	Annual Average 2009-2011	Annual Average 2012-2014
Homicide	11	10
Rape	74	88
Robbery	248	218
Aggravated Assault	899	744
TOTAL Violent Crimes	1,232	1,061

SOCIAL DETERMINANTS OF HEALTH

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TOBACCO USE

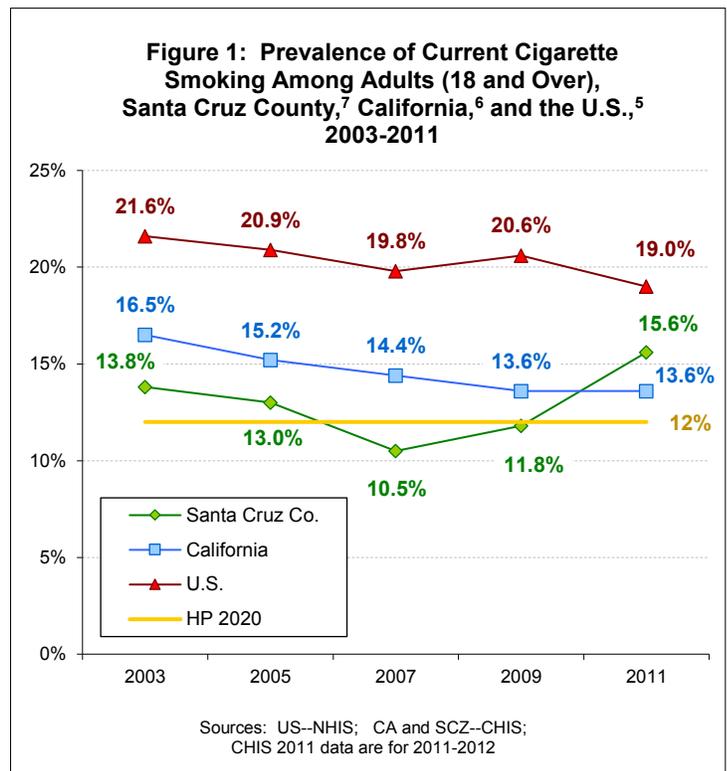
ADULT SMOKING

Smoking is the leading cause of death in the developed world. According to the U.S. Surgeon General, “Smoking harms nearly every organ of the body, causing many diseases and reducing the health of smokers in general.”¹ Cigarette smoke contains over 4,000 chemicals, at least 250 of which are known to harm not only the smoker but also those exposed to environmental smoke.² Non-smokers inhale many of the same chemicals as smokers, including side-stream smoke, which is unfiltered, unlike secondhand smoke exhaled by the smoker. Sidestream smoke can contain benzene, arsenic, and numerous nitrogen compounds.² Non-smokers are also exposed to “third-hand smoke,” chemicals that attach to a smoker’s clothing, hair, and skin and are passed to a non-smoker through direct contact.³ Overall, cigarette smoking and exposure to tobacco smoke cause at least 480,000 premature deaths per year in the United States⁴ – almost 20% of all deaths. Fortunately, “Quitting smoking has immediate as well as long-term benefits, reducing risks for diseases caused by smoking and improving health in general.”¹

The prevalence of U.S. adult smoking has dropped from 42.4% in 1964, when the first surgeon general’s report on tobacco was presented, to 19.0% in 2011.⁵ Santa Cruz County and California residents smoke less than the U.S. population (Figure 1).⁵⁻⁷ For the last decade, Santa Cruz County adult current smoking rates have usually been lower than state rates and have varied around the HP 2020 goal of less than 12% (the county data in Figure 1 vary from year to year because of the limited CHIS sample size for Santa Cruz County).⁷ Based on respondents between 2006 and 2012 to the U.S. Behavioral Risk Factor Surveillance System (BRFSS), 10.1% of adults in Santa Cruz County were current smokers, compared to 12.9% of Californians.⁸

Much of the continuing improvements are attributable to legislation focused on preventing secondhand smoke exposure and making smoking a less attractive habit. In 1985, Santa Cruz County helped lead the way to providing secondhand smoke protections; by the 1990s, each city jurisdiction in Santa Cruz County had also passed an ordinance establishing smoke-free workplaces and enclosed public places.

Figure 1: Prevalence of Current Cigarette Smoking Among Adults (18 and Over), Santa Cruz County,⁷ California,⁶ and the U.S.,⁵ 2003-2011



In 1995, the State of California established statewide protections.⁹ In 2008, a state law took effect that bans smoking in cars when children under the age of 18 are present.¹⁰

More recently, there has been a movement to expand secondhand smoke protection to outdoor areas such as parks and beaches. In 2009, the cities of Santa Cruz and Capitola mandated smoke-free status for public gathering areas such as the municipal wharf, outdoor dining areas, outdoor common areas in multi-unit housing facilities (only in the city of Santa Cruz), the West Cliff Drive recreational trail, Pacific Avenue, and the Esplanade.¹¹ Unfortunately, current smoke-free laws have not addressed smoking in the home; 6.5% of Santa Cruz adults still smoke in their homes, putting family members at risk.⁷

The Cities of Watsonville, Santa Cruz, Capitola, and Scotts Valley, as well as the County of Santa Cruz, have all adopted new tobacco retailer licensing ordinances in recent years.^{12,13,17}

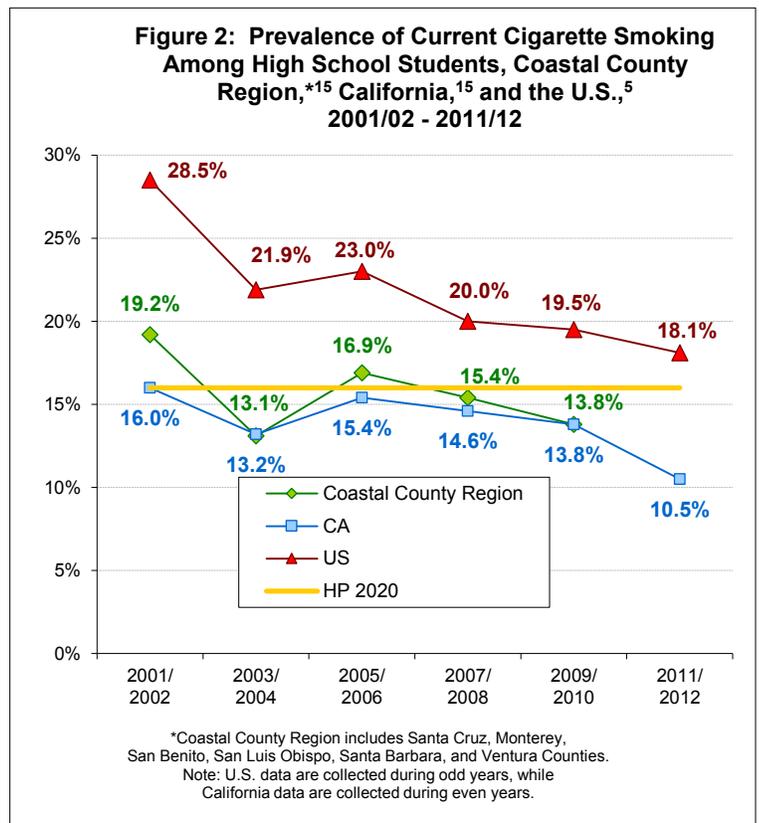
TOBACCO USE

ADOLESCENT SMOKING

Many adult smokers are introduced to tobacco as adolescents, leading to a lifetime of exposure to chemicals that can cause cancer, heart disease, and lung disease not only for the smoker but for those around them as well. Fortunately, the prevalence of smoking among adolescents in the U.S. has been trending down since the 1990s,⁵ and California and Santa Cruz County both have lower prevalences of adolescent smoking than the U.S. (Figure 2).¹⁵

The prevalence of smoking among adolescents in the Central Coast Region (Santa Cruz, Monterey, San Benito, San Luis Obispo, Santa Barbara and Ventura Counties) reflects statewide rates (Figure 2).¹⁵ The prevalence of adolescents in the region who use smokeless tobacco has remained well below the HP 2020 goal of 6.9%, but did not decrease from 2002 to 2010.¹⁵

In 2012, the Surgeon General released a report focusing on tobacco use among youth and young adults.¹⁶ This report highlights the inverse correlation between tobacco product prices and adolescent tobacco use. Products that can be sold cheaply are more attractive to youth. One example is the development of cigarillos, which are cigars that are the size of cigarettes. Cigarillos are not subject to the same strict tobacco legislation as cigarettes, so they are less heavily taxed and may be sold individually, making cigarillos more affordable for youth. Additionally, many cigarillos are designed to appeal to youth, often flavored and designed to look like candy. In 2009, 28.6% of U.S. high school students had ever smoked cigars.¹⁶



ELECTRONIC CIGARETTES (e-CIGARETTES)

Possibly the fastest-growing nicotine threat in the U.S. is e-cigarettes, electronic devices that vaporize nicotine and other chemicals for inhalation. Some jurisdictions do not yet regulate the composition of, access to, or usage of e-cigarettes. The State of California does prohibit sales to minors, and the cities of Santa Cruz, Watsonville, and Scotts Valley prohibit their use wherever cigarette smoking is prohibited.¹⁷ Nevertheless, the usage of e-cigarettes by teens is increasing rapidly, and more teens now use e-cigarettes than use tobacco cigarettes.¹⁸ Tobacco companies originally marketed e-cigarettes as a safer alternative and a smoking cessation tool, but it appears probable that they are primarily another powerful nicotine addiction gateway, likely to increase overall smoking rates rather than reduce them.

TOBACCO USE

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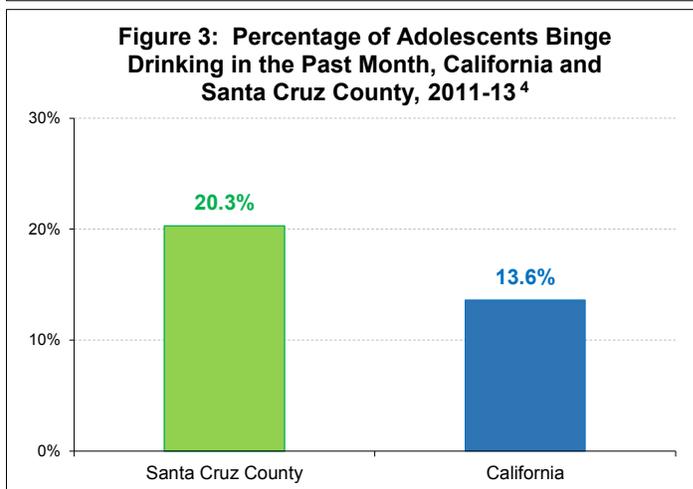
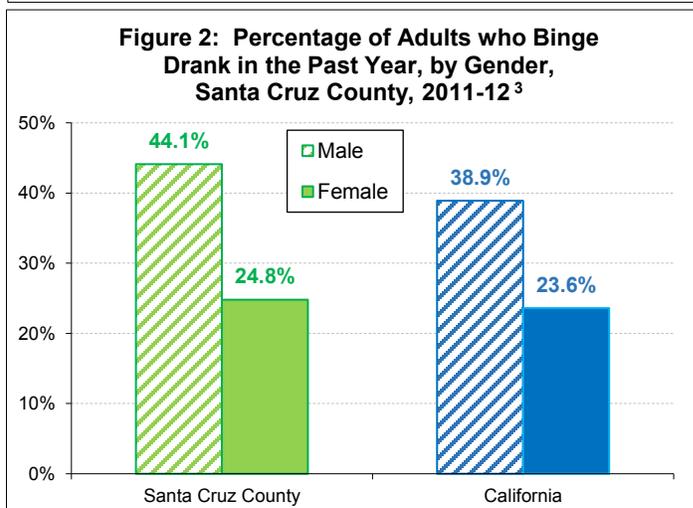
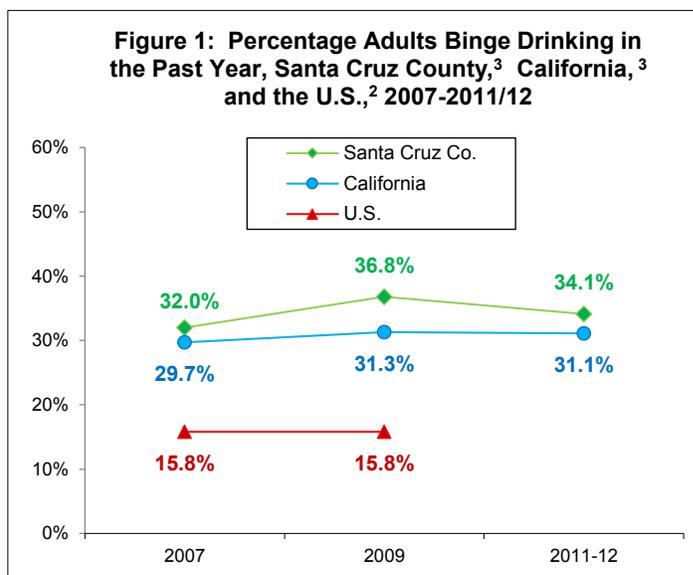
ALCOHOL USE

Excessive alcohol use, including underage drinking, drinking while pregnant, binge drinking (drinking 5 or more drinks on an occasion for men or 4 or more drinks on an occasion for women), and heavy drinking (drinking 15 or more drinks per week for men or 8 or more drinks per week for women), is associated with numerous health problems, such as injuries, violence, liver diseases, and cancer.¹ Even moderate drinking (defined as up to 2 drinks per day for men or up to 1 drink per day for women) is associated with increased health risks. Also, there is no safe level of alcohol use during pregnancy.

Over one-third of adults in Santa Cruz County had an occasion of binge drinking in the past year in 2011-2012, which is more than twice the U.S. percentage of 15.8% in 2009 (Figure 1).^{2,3} By gender, men binge drink more than women in Santa Cruz County and statewide (Figure 2). Binge drinking typically decreases with age, e.g., 13% of persons 65 and over had a binge drinking episode in the past year compared to 48% of persons age 18 to 39 in Santa Cruz County.³

ADOLESCENT ALCOHOL USE

Consequences of youth alcohol use include increased risk of fatal and non-fatal injuries, risky sexual behaviors, poor school performance, and increased risk of suicide and homicide.¹ Research has also shown that youth who use alcohol before age 15 are five times more likely to become alcohol dependent than adults who begin drinking at age 21 or later.¹ Between 2011 and 2013, 20.3% of 7th, 9th, and 11th graders (including non-traditional students) in Santa Cruz County consumed 5 or more servings of alcohol within a couple hours on one occasion within the past month, versus 13.6% statewide (Figure 3).⁴



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ILLICIT DRUG USE

Illicit drug use refers to use of illegal drugs, including marijuana/hashish, cocaine (including crack), heroin, hallucinogens (including LSD and PCP), inhalants, or any prescription-type psychotherapeutic drug used without a prescription. Many people who are addicted to drugs are also diagnosed with mental health disorders, and vice versa. Compared to the general population, people who are addicted to drugs are roughly twice as likely to suffer from mood and anxiety disorders (and the reverse is also true).²

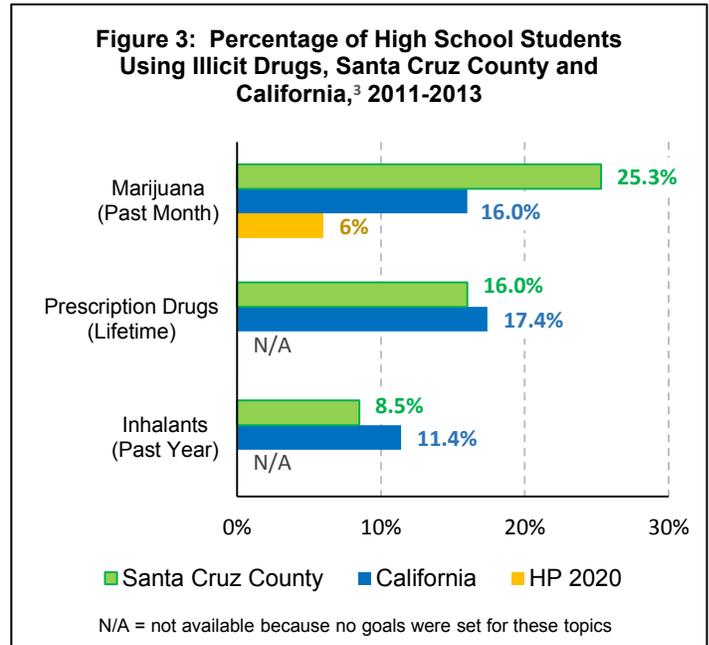
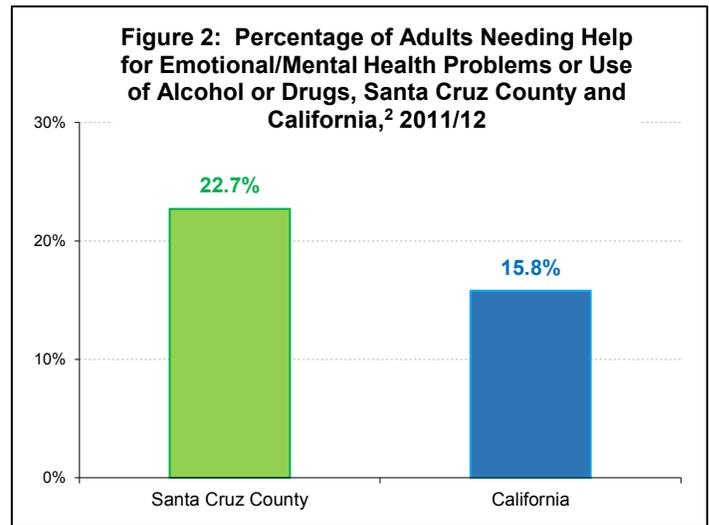
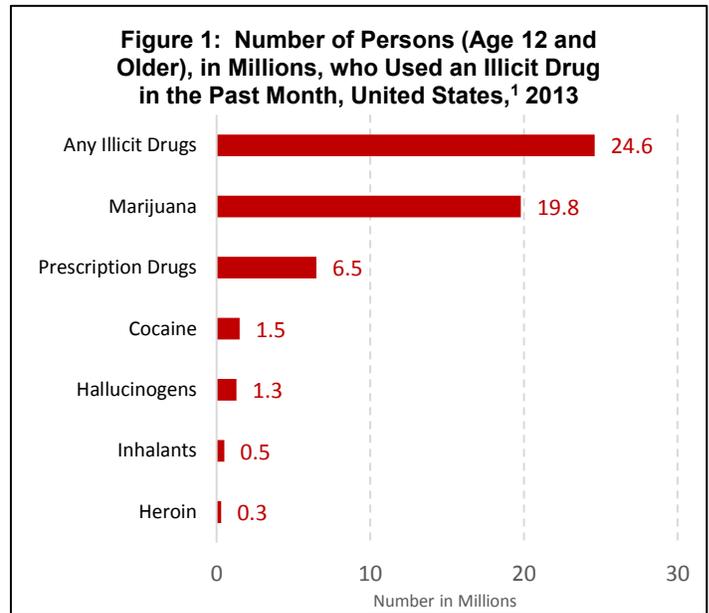
In 2013, an estimated 24.6 million Americans aged 12 or older, 9.4% of the population, used an illicit drug in the past month (Figure 1).¹ Marijuana is the most commonly used illicit drug, followed by prescription pain relievers, and then cocaine. Drug use is highest among people in their late teens and twenties. In 2013, 22.6% of 18-20 year olds reported using an illicit drug in the past month.

In Santa Cruz County, a significantly larger percentage of adults (22.7%) reported needing help for emotional/mental health problems or use of alcohol or drugs, compared to the entire state (15.8%, Figure 2).² By gender, 26.9% of females reported needing help compared to 18.3% of males in Santa Cruz County. Also, persons without insurance were more likely to need help (34.9%) versus those currently insured (20.7%).

ADOLESCENT ILLICIT DRUG USE

Adolescents are especially at risk for the negative and often life-long impacts of drug abuse, because their brains are still maturing.¹ Specifically, the prefrontal cortex, the part of the brain that enables us to assess situations, make sound decisions, and keep our emotions and desires under control, is still developing. Thus, introducing drugs while the brain is still developing may have profound and long-lasting consequences.

The proportions of high school students in Santa Cruz County who have recently used illicit substances are similar to the statewide rates (Figure 3), except for marijuana, for which Santa Cruz County rates are notably higher, 25.3% versus 16.0%, respectively.³ U.S. rates were not comparable because they are assessed at a different age demographic and often different frequency of usage. In past years, the California Healthy Kids Survey included questions on other drugs, but those have been removed, and are no longer available.



ILLICIT DRUG USE

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DIET AND EXERCISE

Regular physical activity and eating a healthy diet are keys to maintaining and improving one’s health, and preventing and controlling chronic diseases. Both efforts substantially reduce the risk of dying from coronary heart disease, decrease the risk for stroke, colon cancer, diabetes, and high blood pressure, and help prevent overweight and obesity. Physical activity also contributes to healthy bones, muscles, and joints; reduces falls among older adults; helps to relieve the pain of arthritis; reduces anxiety and depression; and is associated with fewer hospitalizations, physician visits, and medications.¹

NUTRITION

According to the National Health and Nutrition Examination Survey (NHANES), 2001-2004, Americans consumed 0.5 cups of fruits per 1,000 calories consumed and 0.8 cups of vegetables per 1,000 calories consumed, which is lower than the Healthy People (HP) 2020 goals of 0.9 cup of fruit and 1.1 cups of vegetables per 1,000 calories consumed.²

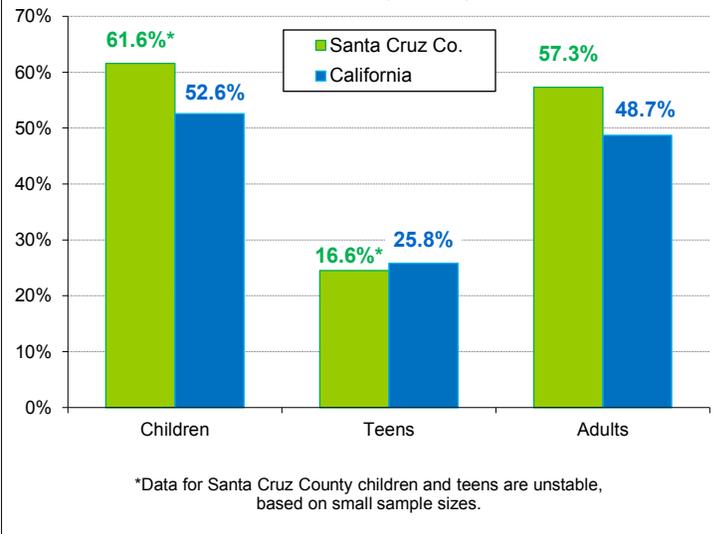
The California Health Interview Survey (CHIS) asks whether children have consumed five servings of fruits and vegetables in the past 24 hours³ (Figure 1). The 2011-2012 survey showed that more Santa Cruz County children (61.6%) than California children (52.6%) had eaten the recommended five fruits and vegetables. More Latino children than White children had eaten the recommended five servings (69.4% v. 56.9%), but the difference was not statistically significant. Teens did not do as well – only 24.5% locally and 25.8% statewide had met the recommendation. Since 2005, CHIS has not asked the question of adults.

The Santa Cruz County Community Assessment Project Telephone Survey⁴ asks whether respondents have eaten five servings of fruits and vegetables at least five times in the last seven days. In the 2013 survey, 57.4% said they had. The percentage was higher among Whites (59.8%) than Latinos (50.3%). This question was revised in 2013, so the results are not comparable with prior-year CAP surveys.

PHYSICAL ACTIVITY

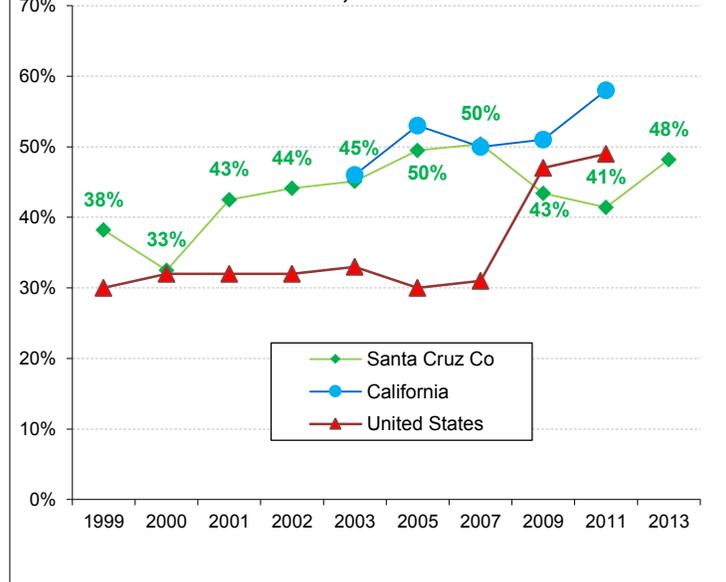
Despite the proven benefits of physical activity, in 2013 only 49.9% of American adults met the CDC Physical Activity Guidelines⁵ (aerobic physical

Figure 1: Children, Teens, and Adults Who Reported Eating Five+ Servings of Fruits and Vegetables Per Day, Santa Cruz County and California,³ 20011/12 (Children and Teens) and 2005 (Adults)



activity of at least moderate intensity for at least 150 minutes per week, or 75 minutes per week of vigorous intensity, or an equivalent combination). However, in 2012, the percentage of Santa Cruz County adults who did not engage in any leisure-time physical activity was estimated at just 11.4%, second lowest of all California counties and eighth best out of 3,146 counties nationwide.⁶

Figure 2: Adults Participating in 30 Minutes of Moderate Activity Five+ Days per Week, Santa Cruz County,⁴ California,⁷ and the U.S.,⁷ 1999-2013



DIET AND EXERCISE

Between 1999 and 2013, the proportion of Santa Cruz County adults who participated in 30 minutes of moderate activity five or more days per week increased from 38% to 48%, in line with U.S. and California adults (Figure 2).^{4,8}

Physical activity is a key factor for children and adolescents to maintain a healthy weight and develop healthy habits that will help prevent chronic disease as they become adults.

An HP 2020 goal is to increase to 20.2% the proportion of adolescents who meet CDC's physical activity guidelines for aerobic physical activity of 60 minutes per day. In 2011-12, 16.1% of California teens reported at least 60 minutes of physical activity seven days a week, excluding PE. Santa Cruz County reported 28.7%, but that number is highly variable due to small sample size.³

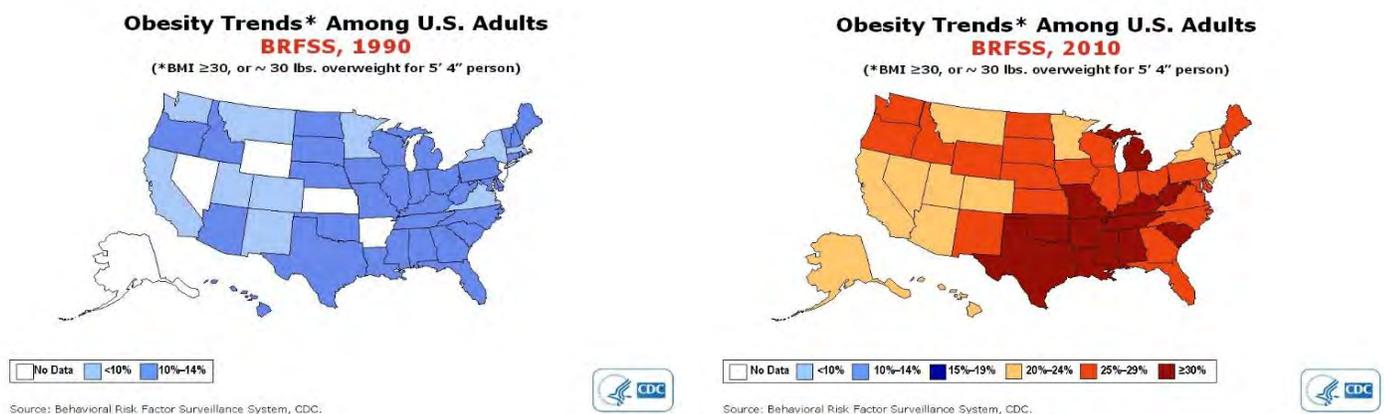
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OVERWEIGHT AND OBESITY

Overweight or obese individuals are at greater risk for many major causes of morbidity and mortality: hypertension, coronary heart disease, stroke, type 2 diabetes, asthma, gallbladder disease, arthritis, sleep apnea, and certain cancers.¹ Diabetes rates closely follow obesity rates, with about a ten-year lag time. Obesity, in combination with physical inactivity, is now second only to smoking as a cause of death in the United States. Childhood diabetes rates are exploding along with obesity rates.

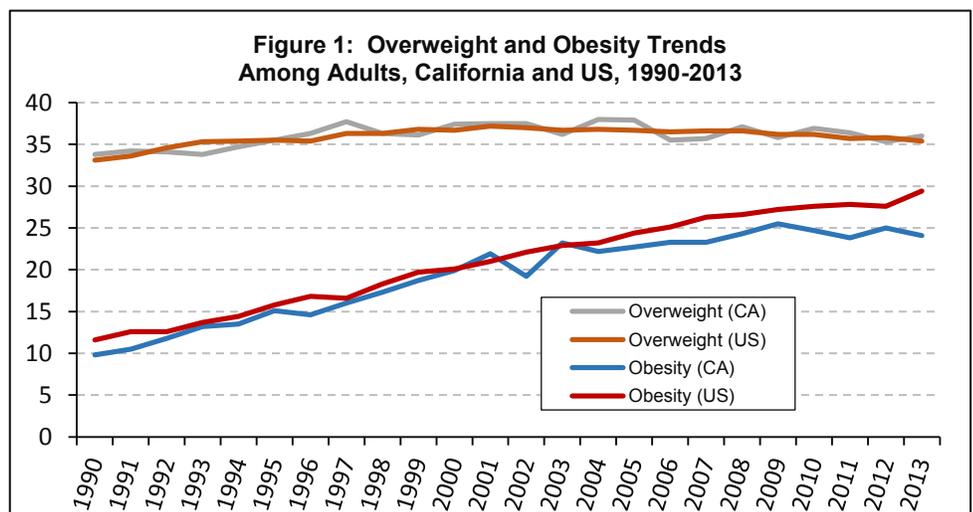
In addition, overweight children are at higher risk for developing hypertension, asthma, orthopedic problems, gallstones, low self-esteem, poor body image, and depression.² Overweight children are twice as likely to become obese adults.²

Local, state, and national rates of overweight (BMI=25-30) and obesity (BMI ≥ 30) have skyrocketed in recent decades. The percentage of obese individuals has been rapidly increasing throughout the United States since 1970³ (full map series available at Reference 3). This “obesity epidemic” is widely regarded as one of the greatest threats to Americans' health, and some experts believe that the current generation of children may be the first generation in American history to have a shorter life expectancy than their parents—primarily because of obesity.⁴



Santa Cruz County and California are not exceptions to the trend. Although California had the fourth lowest rate of obesity in the country (24.1%) in 2013,⁵ the difference is not very large, and data from the Behavioral Risk Factor Surveillance System (BRFSS) show that California's adult overweight and obesity rates have very closely followed the national trends over the past two decades (Figure 1).⁵

There are not many sources for good county-level data on adult weight. However, the Centers for Disease Control (CDC) estimates⁶ the prevalence of adult obesity (age 20 and over) for each county in the United States, based on probability modeling of BRFSS data. The CDC estimated the age-adjusted rate of obesity in Santa Cruz County adults in 2012 as 20.1%, 11th lowest in the state, and 65th lowest in the entire nation.⁶



OVERWEIGHT AND OBESITY

The California Health Interview Survey (CHIS) is one of the few other sources of local information on adult weight (age 18 and over). The most recent CHIS data, from 2011-12,⁷ differs from the BRFSS estimates and shows Santa Cruz County adults with higher rates of obesity than California adults statewide – 27.1% for the county, compared to 24.8% statewide – but the CHIS county sample size is small and allows great variation in the county estimate. There was a substantial disparity by ethnicity: only 20.7% of White adults were obese, compared to 34.4% of Latinos. A similar disparity was found statewide (21.9% of White adults obese, compared to 32.6% of Latinos).

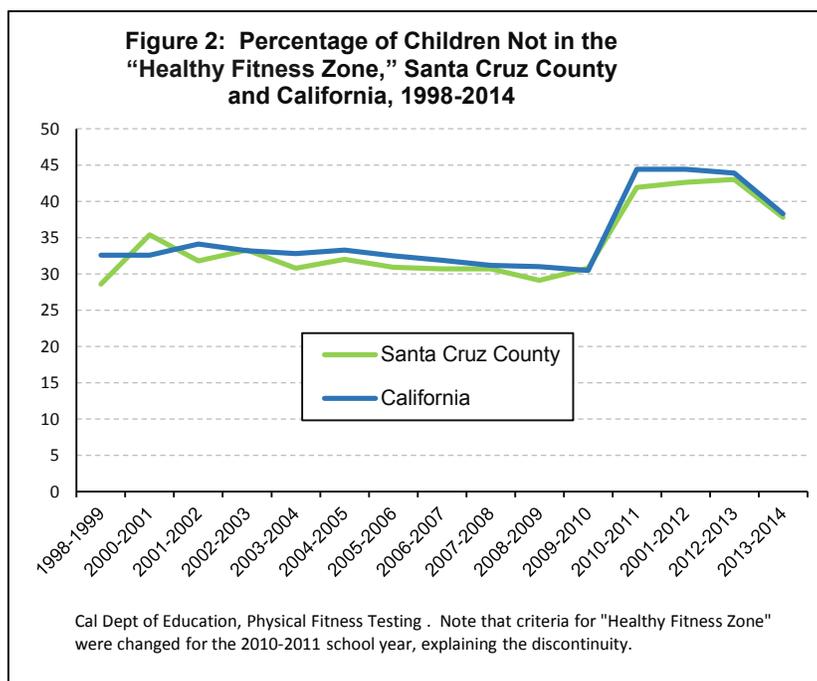
The obesity data present only part of the problem; **overweight** is even more common than **obesity**. In addition to the 24.8% of California adults whom CHIS identified as obese, another 35.0% were overweight; and in addition to the 27.1% of Santa Cruz County residents who were obese, another 31.3% were overweight. In 2013, BRFSS found that 60.2% of California adults and 64.6% nationally were either overweight or obese.⁸ The 2014 Community Assessment Project survey⁹ reported that 61.1% of Santa Cruz County adults were either overweight or obese.

CHILDREN AND ADOLESCENTS

The best information about childhood weight in Santa Cruz County comes from the California Department of Education's (DoE) annual Physical Fitness Testing Report.¹⁰ Each year, most children in grades 5, 7, and 9 are evaluated on a variety of fitness characteristics, including measurements of Body Mass Index (BMI). During the 2013-2014 school year, the percentages of children in Santa Cruz County whose BMI fell outside the "Healthy Fitness Zone" were 39%, 37%, and 37% in grades 5, 7, and 9 respectively. These percentages were not significantly different from the statewide averages: 41%, 39%, and 36%, respectively. (The numbers include not only overweight but also underweight children, who generally are about 2-3% of the total.) Because the definitions used were changed substantially in 2011, the state and county rates are now much higher than in previous years (see the discontinuity in 2010-2011 in Figure 2). However, when the 2011 data were evaluated by the criteria used in previous years, the state and the county each had the best rates seen since the Physical Fitness Testing program began in the 1998-1999 school year, continuing a decade-long trend of very slow improvement, and subsequent years have continued that trend.¹⁰

The DoE Physical Fitness Report shows a dramatic disparity between White and Latino children. In 2013-2014, the proportion of White children outside the Healthy Fitness Zone was 24% in Santa Cruz County and 28% statewide, compared to Latino rates of 49% locally and 46% statewide.

CHIS⁷ reports on children (through age 11) and teens (ages 12-17) as separate groups. Among children in Santa Cruz County in 2011-12, CHIS reported that 13.8% were overweight for age, compared to 12.6% statewide. Among Santa Cruz County teens, 37.5% were obese and another 6.2% were overweight; the statewide averages were 15.8% and 16.6%. The county numbers are based on very small sample sizes and are extremely variable.



OVERWEIGHT AND OBESITY

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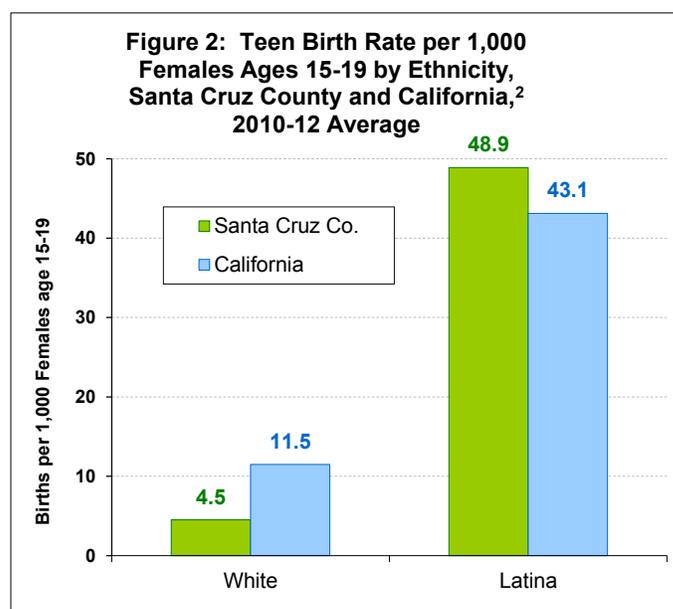
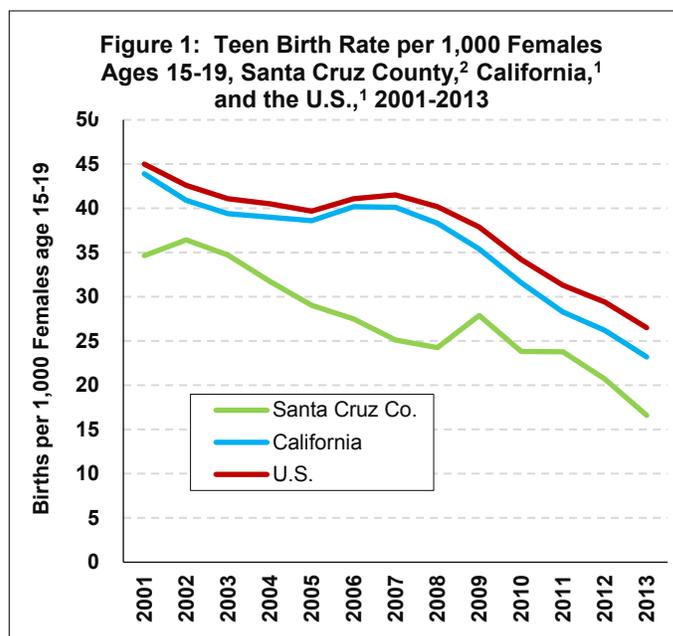
TEEN BIRTHS

Teen pregnancy prevention is of paramount importance to the health and quality of life of our youth. Teen pregnancy and parenthood bring substantial social and economic costs through immediate and long-term impacts on teen parents and their children. Only about 50% of teen mothers receive a high school diploma versus 90% of women who had not given birth during adolescence.¹ Children born to teen parents are also more likely to have lower school achievement, give birth as a teenager, and face unemployment as an adult. Teen pregnancy is one of CDC's six “winnable battles” in public health. Evidence-based prevention programs typically address protective factors on the basis of knowledge, skills, beliefs and attitudes related to teen pregnancy.

In 2013, the U.S. teen birth rate was 26.5 births per 1,000 females ages 15-19. This is another record low for U.S. teens, and a drop of 10% from 2012.¹ California and Santa Cruz County also experienced record lows in 2013, with rates of 23.2 and 16.6 per 1,000 females ages 15-19, respectively.² Overall, Santa Cruz County rates have been consistently lower than state and national rates (Figure 1). However, Latina rates in Santa Cruz County were higher than Latina rates statewide, whereas rates among White teens in Santa Cruz County were lower than state rates between 2010 and 2012 (Figure 2).²

Younger teens in Santa Cruz County (ages 15-17) had a birth rate of 16.4 per 1,000 between 2010 and 2012, compared to the California rate of 14.8 – both well below the Healthy People 2020 objective of 36.2 per 1,000 for this age group. The state-local difference was not statistically significant. However, among Latinas in that age group, rates were significantly higher in Santa Cruz County than for statewide counterparts – 32.1 versus 23.5 per 1,000.² Fortunately, these rates have been decreasing steadily over the years.

Among older teens (ages 18-19), Santa Cruz County rates are significantly lower than state rates, 28.3 versus 47.6 per 1,000 females, respectively. Both rates are far below the Healthy People 2020 objective of 105.9 per 1,000 females age 18-19.



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BREASTFEEDING

In 2011, the U.S. Surgeon General released a “Call to Action to Support Breastfeeding,” stating that everyone can help make breastfeeding easier.¹ Although hospitals are not intended to be the only place a mother receives support for breastfeeding, hospitals do provide a unique and critical link between breastfeeding support before and after delivery. Therefore, the World Health Organization (WHO) and the United Nations Children’s Fund (UNICEF) sponsor the Baby-Friendly Health Initiative (BFHI) as a global program designed to encourage and recognize hospitals and birthing centers to offer an optimal level of care for infant feeding. There are three hospitals in Santa Cruz County. Two (Sutter Maternity & Surgery Center and Dominican Hospital) are designated “Baby-Friendly,” and the third (Watsonville Community Hospital) is currently going through the application process at the time of this report’s publication.

The CDC estimates 79% of U.S. mothers breastfed at birth, while only 17% exclusively breastfeed six months later.² County-level breastfeeding data is only collected in the hospital, usually within 24-48 hours following birth, so it is unknown how long breastfeeding continues after hospital discharge in Santa Cruz County. Hospital staff select from the following three categories to describe all feeding at birth: human milk only (i.e., exclusive breastfeeding), formula only, or human milk and formula. In 2013, 98.1% of infants residing in Santa Cruz County were given at least some breast milk while hospitalized, compared to 93.0% statewide.³ The Healthy People 2020 objective is 81.9%; therefore, both the county and the state have surpassed the national goal. However, exclusive breastfeeding is considered the ideal infant feeding, and 86.0% of infants in Santa Cruz County were given human milk only, compared to 64.8% statewide (Figure 1). Differences by ethnicity can be seen locally and statewide; however, the gap is narrowing, with more Latino infants being fed human milk only (Figure 2). By hospital, the 2013 exclusive breastfeeding rates were highest at Dominican Hospital at 94.7%, Sutter Maternity was close behind at 93.1%, and Watsonville Community Hospital was at 74.8%. The greatest improvements have been at Watsonville Hospital, where the rate was 53.4% in 2010.

Figure 1: Percentage of Mothers Exclusively Breastfeeding at Birth, by Infant Ethnicity, Santa Cruz County and California,³ 2013

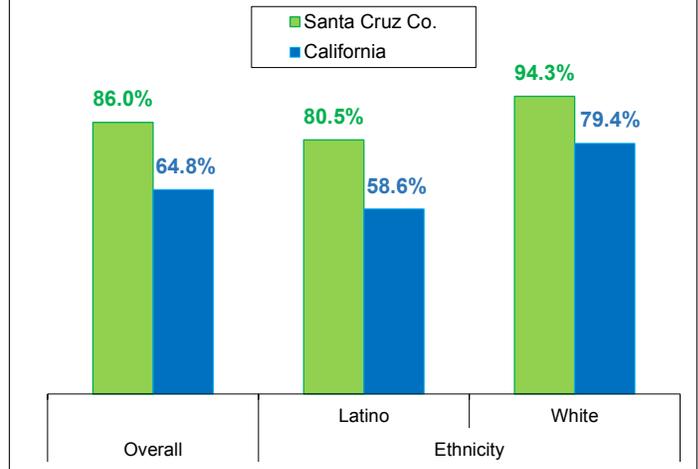
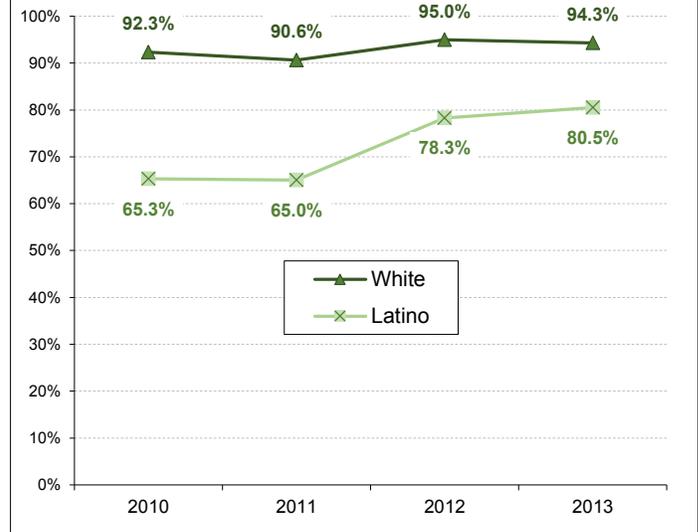


Figure 2: Percentage of Mothers Exclusively Breastfeeding at Birth, by Infant Ethnicity, Santa Cruz County,³ 2010-2013



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IMMUNIZATIONS

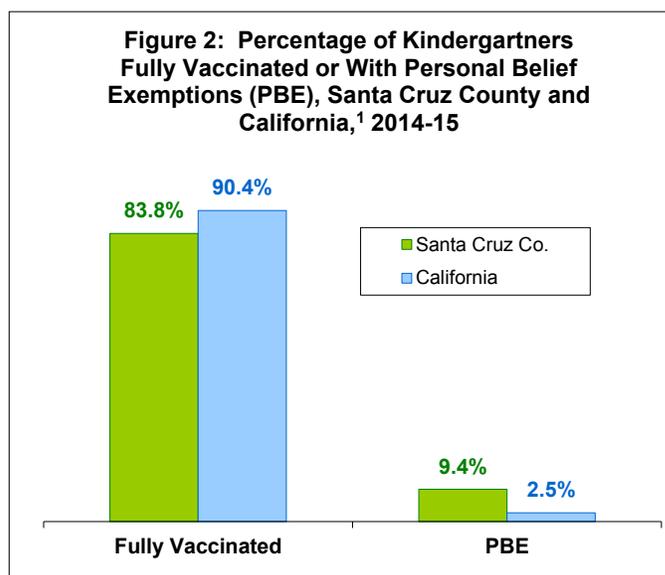
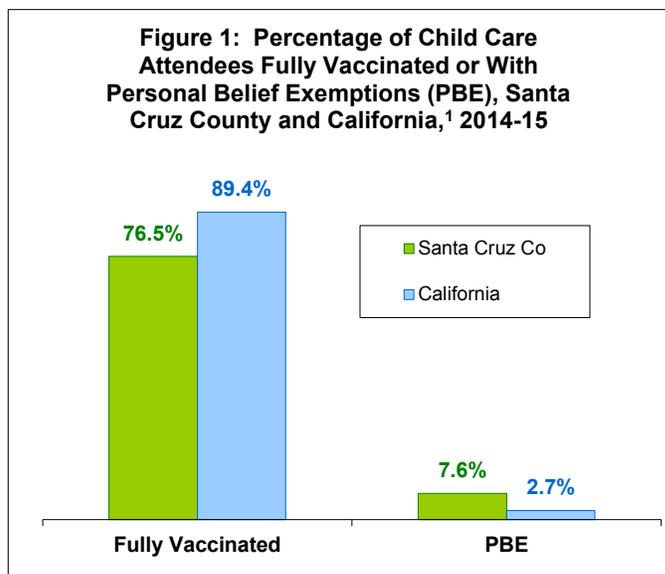
Vaccines prevent disease both directly, in the people who receive them, and indirectly, by reducing the number of infected people who could otherwise transmit infection. Vaccines are responsible for the control of many infectious diseases that were once common in this country. High vaccination coverage in children by age 2 has resulted in historically low levels of most vaccine-preventable diseases in the United States; coverage must be maintained to reduce the burden of disease and prevent a resurgence of these diseases, particularly in populations with lower vaccination coverage.

In the fall of 2014, 89.4% of children entering licensed child care in California were fully immunized, compared to 76.5% of Santa Cruz County children ages 2 years to 4 years, 11 months (Figure 1).¹ In Santa Cruz County, 7.6% of attendees (versus 2.7% statewide) were not fully vaccinated because of a personal belief exemption (PBE); the remainder were either conditional entrants (in process to be fully vaccinated but not yet having all required vaccinations) or permanent medical exemptions. Also, only one-third of children in this age group are estimated to attend child care centers, so the data does not represent the entire population of children in this age group.

Among kindergartners, 90.4% had received all required immunizations statewide in the fall of 2014, compared to 83.8% in Santa Cruz County (Figure 2).² The difference is due to PBE rates – 9.4% in Santa Cruz County in 2014, compared to 2.5% statewide. Within Santa Cruz County, PBE rates vary greatly by school; Reference 2 provides school-specific rates. Parents considering exemptions for their children should be aware of the risk for disease both for their children and the public.

CALIFORNIA SENATE BILL 277

On June 30, 2015, California Governor Jerry Brown signed a bill that removes all exemptions to vaccine requirements for school entry except those medically indicated. Brown asserted, “The science is clear that vaccines dramatically protect children against a number of infectious and dangerous diseases.” The law applies to any public or private school. Kindergartners who were PBE's prior to the law’s implementation will be “grandfathered in,” and they will not be required to be vaccinated until 7th grade when immunizations are assessed.



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ACCESS TO CARE

Access to health care is one of the fundamental determinants of good health; and in this country, health insurance is a fundamental determinant of access to care. Health care costs are rising much faster than incomes, and faster than other costs of living, leaving many people unable to afford medical care – although the Affordable Care Act appears to have substantially slowed the rate of increase of health insurance costs. Lack of health insurance leads people to forgo preventive medical care, resulting not only in worse health outcomes but also in greater monetary costs. Moreover, uninsured persons are more likely to present with more severe illness and to seek care at emergency rooms rather than using less expensive primary care practitioners to whom they have no access.¹

HEALTH INSURANCE REFORM

The passage of the Affordable Care Act (ACA) in 2010 has already had a considerable impact on health insurance coverage, even though some of its most important provisions have only recently come into effect. The ACA has substantially reduced the number of Americans without health insurance.

The law mandates that most people obtain coverage. It provides subsidies to those who need financial assistance, prohibits the denial of coverage on the basis of pre-existing conditions, prohibits cancellation of coverage as a result of getting ill, expands eligibility for Medicaid (Medi-Cal), allows parents to maintain their children on their insurance plan through age 25, creates an incentive for employers to provide insurance, eliminates lifetime coverage caps, prohibits co-pays for preventive services, closes the prescription drug benefit hole, and makes many other changes to broaden insurance coverage. These provisions are eventually expected to extend health insurance coverage to 32 million of the estimated 40 million Americans who were without coverage when the ACA was passed.

On the other hand, since the cost of employer-provided family coverage is in the range of \$15,000 per year,² while the payment imposed under the new law for employers failing to provide coverage is only about \$2,000 per employee per year.³ A few employers have stopped providing insurance, and there may be serious dislocations until the mandated regulations fully take effect and equalize access to care. Moreover, the ACA does not extend coverage to non-citizens. However, California recently passed legislation to extend Medi-Cal coverage to low-income children regardless of immigration status. Legislation to extend coverage to

undocumented adult immigrants has passed the Assembly; and the County Medical Services Program (CMSP) recently decided to extend coverage to undocumented immigrants in the 35 counties covered by the program. (Santa Cruz is not a CMSP county.)

PUBLIC HEALTH INSURANCE PROGRAMS

Santa Cruz County residents may qualify for a wide variety of public health insurance programs.

Most people age 65 or older are eligible for Medicare, which offers comprehensive coverage at little or no cost.

Santa Cruz County is served by the Central California Alliance for Health, a locally governed nonprofit managed care health plan for low-income people that also serves Monterey and Merced Counties. The Alliance facilitates operation of the Medi-Cal program, California's enhanced version of the federal Medicaid program. Medi-Cal uses state and federal funds to cover low-income adults and children. Medi-Cal enrollees must re-apply each year to maintain coverage. For those with unsatisfactory residential documentation, Medi-Cal covers only pregnancy-related and emergency services.

In Santa Cruz County, the Alliance also operates Healthy Kids, an insurance program for low-income children who do not have documentation of residency to qualify for Medi-Cal. With the implementation of SB-4, by May 2016 children currently enrolled in Healthy Kids will qualify for an expanded Medi-Cal program.

HSA's Children's Medical Services includes two programs — California Children's Services (CCS) and Children's Health and Disability Prevention (CHDP) — that help cover low income children and youth, including the undocumented.

CCS operates as a federal-state-county partnership that provides diagnosis, treatment, and case management for children under age 21 with certain eligible major medical conditions (approximately 1,500 children each year). 77% of the covered children are eligible under regular Medi-Cal, so their treatment is paid by state and federal funds; another 16% are eligible for Medi-Cal under an expansion program (Transitional Low Income Children's Program), and their treatment is by a mix of county, state, and federal funds; treatment of the 6% who cannot qualify for Medi-Cal is funded by the state and county equally. CCS also provides physical and occupational therapy at no cost to children with qualifying medical conditions without regard to family income or insurance.

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CHDP confers presumptive Medi-Cal eligibility from the date of application at a well-child check-up through the following calendar month, covering early and periodic screening, diagnosis, and treatment. Also called CHDP Gateway, the program is intended as a bridge to Medi-Cal. Santa Cruz County's CHDP Gateway leads the state in success: each year, 55%-65% of Gateway children become benefited under Medi-Cal or Healthy Kids.

Finally, the MediCruz program uses county funds to provide coverage for low-income adults (ages 19-64) who have lived in the county for at least six months and have no other coverage. Medi-Cruz provides only episodic care for specific medical conditions and does not provide on-going preventive care; enrollees must re-apply every 3-6 months to retain coverage.

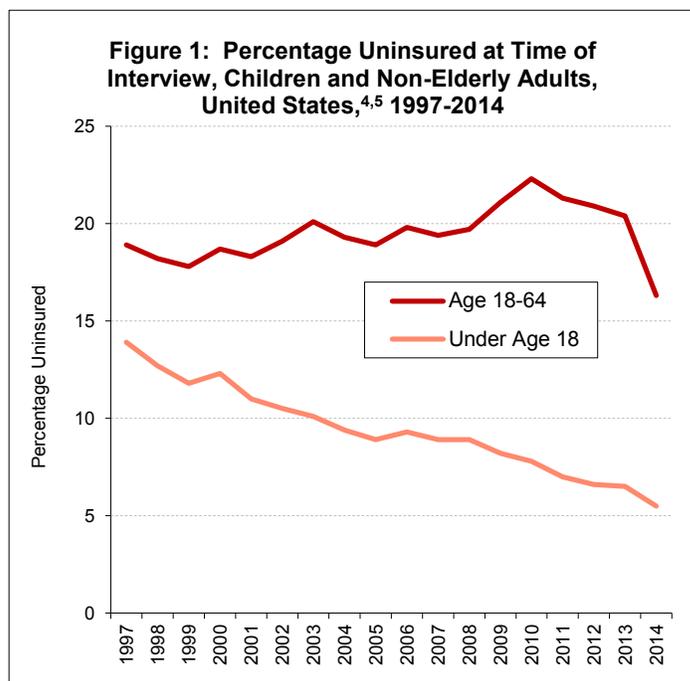
HEALTH INSURANCE COVERAGE RATES

From 1997-2008 there was no substantial change in the proportion of non-elderly adult Americans (ages 18-64) living without health insurance (Figure 1).^{4,5} The economic crash in 2008 led to a jump in the number of uninsured adults. But after the major provisions of the Affordable Care Act took effect in 2014, the uninsured rate dropped to the lowest level in American history.⁶ Children (under age 18) are especially likely to be insured; children's uninsured rates nationally have dropped fairly steadily from 14% in 1997 to 5.5% in 2014.^{4,5}

The U.S. Census Bureau estimated Santa Cruz County's uninsured rate in 2013 among adults aged 18-64 at 22.1%, not much different from the statewide rate of 23.9%.⁷ The Census Bureau estimated rates for children (ages 18 and under) at 8.1% for Santa Cruz County, compared to 7.9% statewide.⁷

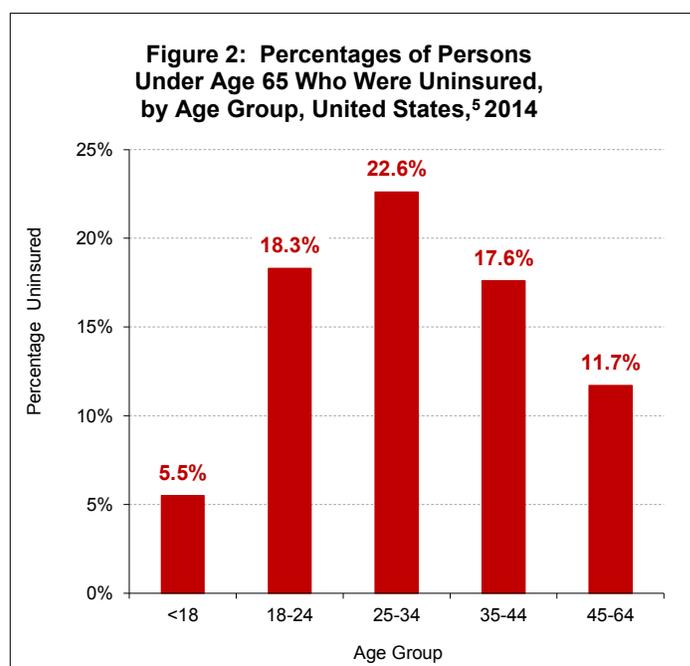
The CAP survey in 2013 found that 16% of county respondents were uninsured; the White rate was only 8%, while the Latino rate was 41%.⁸ CHIS' 2011-12 survey reported an uninsured rate of 13% in Santa Cruz County, similar to the statewide rate of 15%; the White rate was under 10% both locally and statewide, while the Latino rates were more than twice as high.⁹

Until recently, young adults (ages 18 to 24) were the age group most likely to be uninsured. This may have reflected both a lesser perceived need for insurance among young adults and a lesser ability to pay for insurance. However, the Affordable Care Act's



provision allowing children to be maintained on their parents' insurance through age 25 has changed that. In each of the older age groups, the percentage uninsured increased after the economic crash, but in the 18-24 age group the percentage uninsured actually dropped in spite of the recession (Figure 2).⁵

In every age group under 65, men are more likely than women to be uninsured. Nationally, in 2014, the difference was greatest (7.3%) in the 25-34 age group, and small (1.3%) in the 45-to-64 age group.⁵



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Nationwide, Latino ethnicity is very strongly associated with a lack of health insurance coverage. In the U.S., Latinos are two and a half times as likely as non-Hispanic Whites to be uninsured – 25% compared to 10% in 2014⁵ – while the rates among Blacks and Asians are 14% and 11% respectively (see Figure 3 for historical trends).

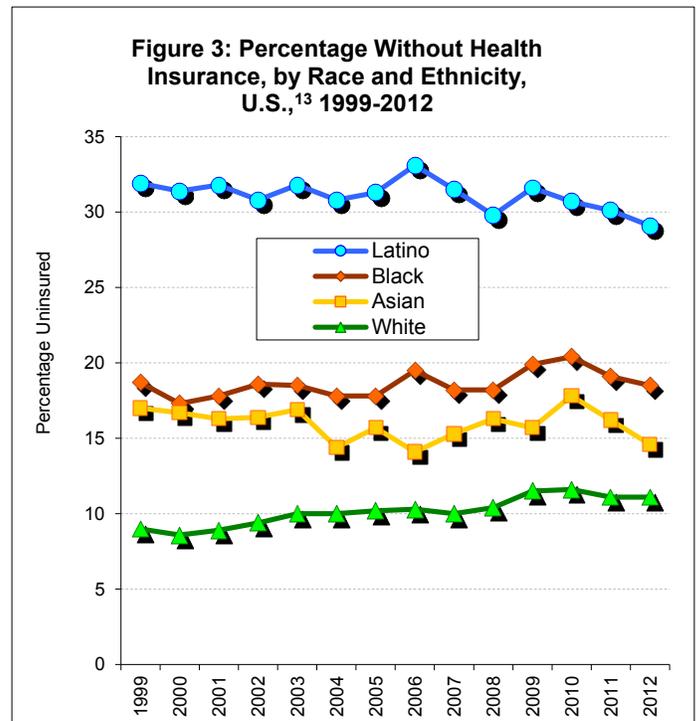
California has historically had a higher proportion of uninsured persons than most other states. In 2013, the U.S. Census Bureau estimated that 17.2% of California residents were without coverage; the rate for the U.S. as a whole was 14.5%, and only seven states had higher rates than California.¹⁰ However, the Behavioral Risk Factor Surveillance System reported similar uninsured rates for California (17.2%) and the U.S. (16.8%) in 2013.¹¹ California’s usual high proportion of uninsured persons can be attributed partly to its high proportion of Latinos (tied for second highest among all states),¹² who have high uninsured rates.¹³ California Hispanics, non-Hispanic Whites, and non-Hispanic Blacks each have uninsured rates similar to national rates for those groups, respectively.^{7,13}

UNDERINSURANCE

Unfortunately, many people’s health insurance coverage does not adequately shield them from large medical expenses. “Underinsured” persons are those who spent at least 10% of their income on health care (5% for low-income persons), or at least 5% of their income on health insurance deductibles. As of 2014, there were an estimated 31 million underinsured adults in the United States – 23% of the population ages 19-64, nearly double the percentage in 2003.¹⁴ The rapid increase is primarily due to increases in insurance plan deductibles.

In 2014, 44% of underinsured persons went without needed care, including not seeing a doctor when sick, not filling prescriptions and not following up on recommended tests or treatment. Being underinsured is a problem that goes beyond the poor; even among those with annual incomes of 2.5 to 4 times the Federal Poverty Level, 21% were underinsured.

Although these data cover the latter half of 2014, they do not address potential effects of the Affordable Care Act, because the people included in the survey were insured all year and thus had insurance that began before the law’s major coverage expansions and reforms went into effect.



DENTAL INSURANCE COVERAGE

Dental health is important in its own right, but also contributes in important ways to overall health. Research has pointed to associations between chronic oral infections and cardiovascular disease, stroke, fatal heart attacks, bacterial pneumonia, and premature birth, as well as making the control of diabetes more difficult.¹⁵ In addition, attentive oral health care can contribute to early detection of a wide variety of other illnesses. A thorough oral examination can detect signs of nutritional deficiencies as well as a number of systemic diseases, including microbial infections, immune disorders, injuries, and some cancers.¹⁵

Dental health is a challenge in Santa Cruz County, particularly due to the county’s inability, as yet, to establish a drinking water fluoridation program. Lack of dental health insurance coverage is much more widespread than lack of medical health insurance. Santa Cruz County’s Community Assessment Project survey reported that 42% of respondents had no dental coverage in 2013, up from 28% in 2003.⁷

With the reinstatement of adult dental benefits through Denti-Cal (most dental care wasn’t covered from 2009-2014) and the implementation of the Affordable Care

ACCESS TO CARE

Act, there is great demand for affordable dental care. But because of the low reimbursement rates, fewer than ten providers in Santa Cruz County accept Denti-Cal. For the uninsured, resources are even more limited.

Dientes Community Dental Care, a non-profit dental clinic, provides emergency, preventive, restorative, and rehabilitative services to uninsured and publicly insured patients (Denti-Cal and Healthy Kids). Approximately 16% of Dientes patients are uninsured, and over 96% live at or below the Federal Poverty Level. Dientes expects to provide 30,000 visits to more than 9,000 individual patients in fiscal year 2015-2016. Dientes operates out of a 15-chair clinic centrally located in Santa Cruz, near Dominican Hospital and on a SCMTD route. They also offer services at the County of Santa Cruz Watsonville Health and Dental Center on Freedom Boulevard, and soon will open a one-chair outreach clinic at the Homeless Services Center. In addition to services provided in a clinic setting, Dientes' Outreach Program brings services to 30 other locations throughout the county. Outreach locations include Women, Infants, and Children (WIC) centers; 20 elementary, middle, and high schools across the county; and skilled nursing facilities. Patients who do not have insurance coverage pay on a sliding fee scale. In order to keep rates affordable, Dientes fundraises to subsidize patient fees. The County of Santa Cruz provides some funding through the Homeless Persons Health Project, the HIV CARE Team, and the Human Services Department.

Publicly insured individuals needing oral surgery, sedation dentistry, or other special services must usually travel out of the county to receive care.

PRIMARY CARE PROVIDER RATE

The primary care provider (PCP) rate is the number of practicing primary care physicians per 100,000 persons; a high number indicates ready availability of primary care, while too low a number indicates a shortage of primary health care providers. High PCP rates are strongly correlated with high life expectancies. According to the County Health Rankings, in 2012, county PCP rates (including OB/GYNs) varied from as few as 14 per 100,000 in Glenn County to as many as 160 per 100,000 in San Francisco, while Alpine County had no PCPs at all. The statewide average PCP rate was 77, and Santa Cruz County's rate was 97, ranking the county 10th best in the state and about 274th out of over 3,100 counties in the country.¹⁶

However, the California Healthcare Foundation (CHCF) reported¹⁷ a 2013 PCP rate of just 75 per 100,000 for Santa Cruz County, only 23rd in the state. And the American Association of Medical Colleges calculated a rate of 91.0 active primary care physicians per 100,000 population in California in 2012, essentially identical to their calculated national rate of 90.1.¹⁸ It is not clear why different organizations cite different numbers.

A low PCP rate makes it difficult for patients, whether insured or not, to gain access to primary care, preventive care, and referrals when they need them. There is evidence that good access to primary care can reduce overall demand for medical care, probably through enhanced coordination of care and a preventive care focus.¹⁹ Yet many PCPs in California already are not accepting any new patients, and the problem is expected to get worse: the population continues to grow, but the number of new physicians remains fairly constant; a large proportion of physicians are nearing retirement age, while only a limited number of new physicians will be available to replace them; and we can expect an increased demand for medical care as a result of health care reform.²⁰

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QUALITY OF HEALTH CARE

The Institute of Medicine defines health care quality as “the degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge.”¹ The goal of improving quality of care is to decrease the rates of complications, morbidity, and mortality, and the cost of care.

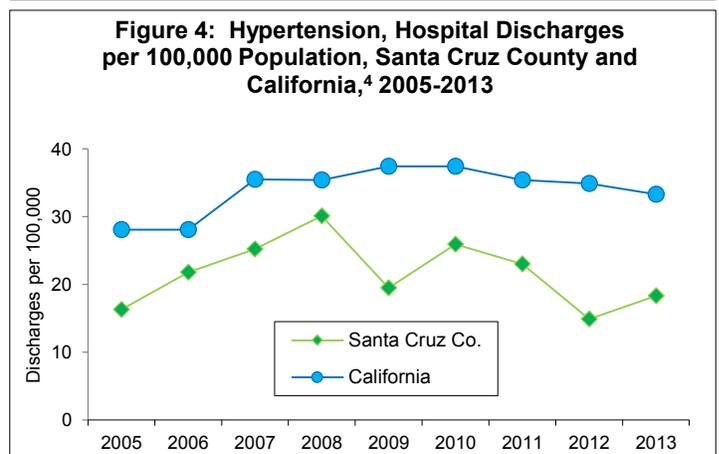
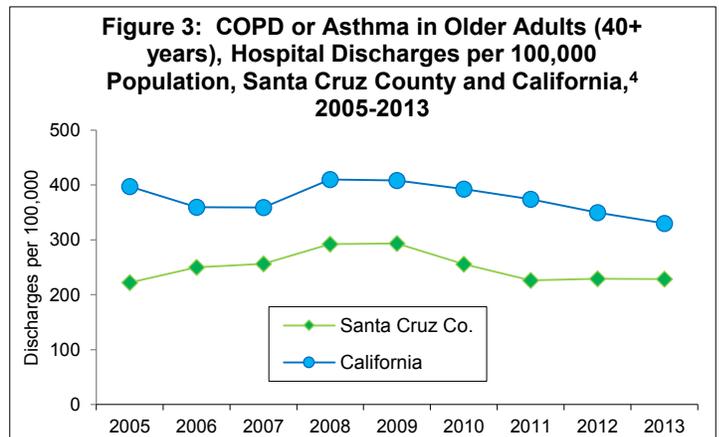
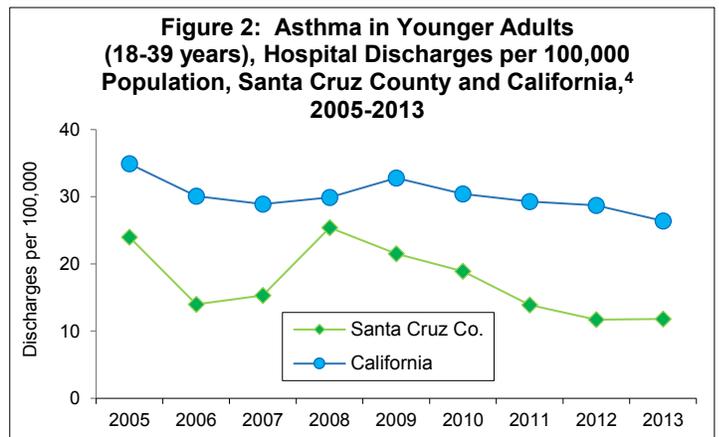
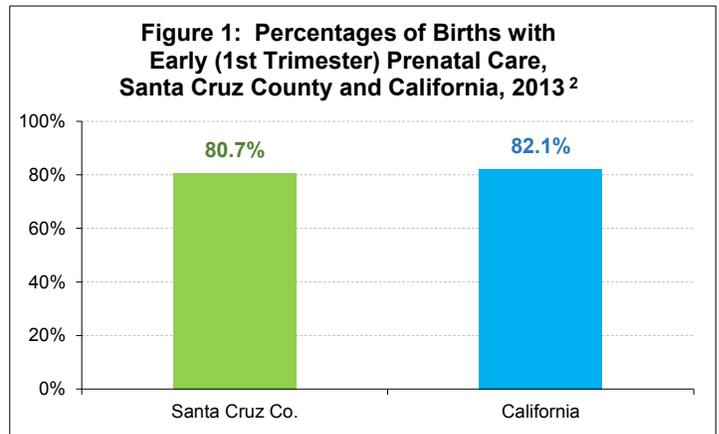
PRENATAL CARE

Prenatal care allows for monitoring of the baby's and the mother's health. Early prenatal visits can also be helpful and informative regarding nutrition, alcohol, tobacco or substance use, parenting, family changes, and much more. It is an indication of good health care when prenatal care begins in the first trimester of pregnancy. In Santa Cruz County, 80.7% of mothers received early prenatal care in 2013, compared to 82.1% statewide (Figure 1).²

PREVENTABLE HOSPITALIZATIONS

The Agency for Healthcare Research and Quality (AHRQ) has identified certain chronic medical conditions, termed ambulatory-care sensitive conditions (ACSC), that can often be managed with timely and effective treatment in an outpatient setting, thereby preventing hospitalizations. Measuring hospitalization rates for ACSCs is considered Prevention Quality Indicators (PQIs) by AHRQ. Although other factors outside the direct control of the health care system, such as poor environmental conditions or lack of patient adherence to treatment recommendations, can result in hospitalization, the PQIs provide a good starting point for assessing quality of health services in the community.

Based on Medicare claims data of persons age 65-99, the Dartmouth Atlas of Health Care shows that in 2012, Santa Cruz County had 34.4 ACSC stays per 1,000 Medicare enrollees, while California had 45.3 per 1,000 enrollees.³ Santa Cruz County has been consistently lower than the state since 1996, and rates in both the county and the state have been decreasing over time. Figures 2 through 4 compare state and local hospitalization rates (discharges per 100,000 population) for asthma, COPD, and hypertension from 2005 to 2013.⁴ For each of these conditions, Santa Cruz County rates have been consistently lower than statewide rates.



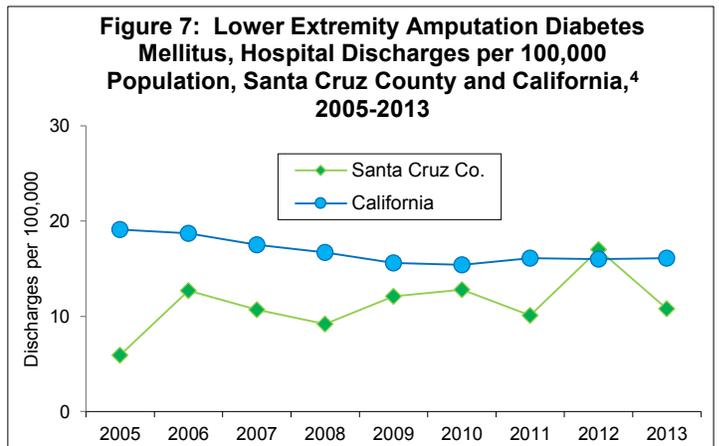
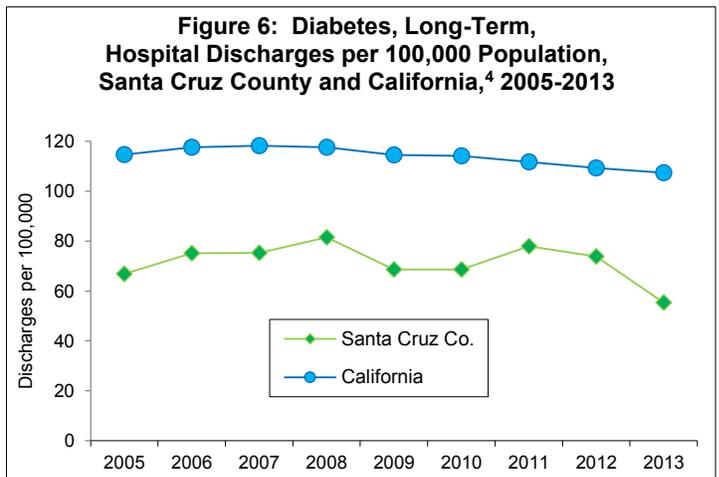
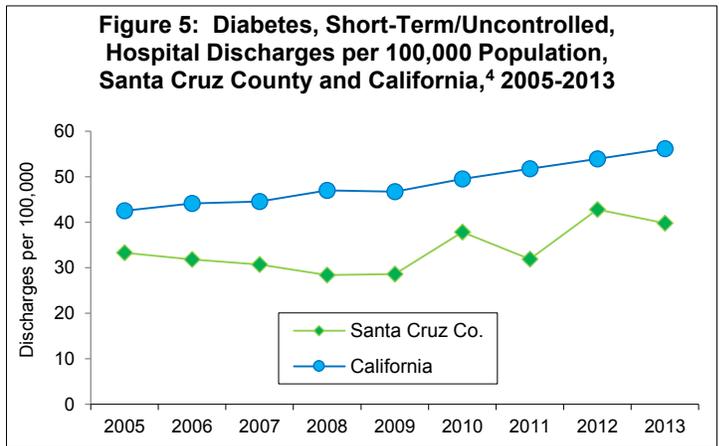
QUALITY OF HEALTH CARE

DIABETIC SCREENING & MANAGEMENT

Control of blood glucose, blood pressure, and blood lipid levels helps to prevent serious complications of diabetes such as blindness, limb amputations, heart disease, and strokes. The diabetic screening rate is the percentage of diabetic patients whose blood sugar was screened in the past year by testing their glycated hemoglobin (HbA1c) levels. Based on Medicare claims data, the Dartmouth Atlas of Health Care shows that 80.7% of the Medicare diabetic population in Santa Cruz County received HbA1c screening in 2010, slightly better than the rate of 80% for the Medicare diabetic population throughout California.³

The costs for treating diabetes are rising: \$245 billion was spent in 2012, up from \$174 billion in 2007, when the cost was last examined.⁵ This figure represents a 41% increase over a five-year period. It is estimated that 1 in 5 health care dollars, and 1 in 3 Medicare dollars, is spent caring for people with diabetes.⁶

Hospitalizations for the short-term complications of diabetes (ketoacidosis, hyperosmolarity, or coma) are steadily increasing both locally and statewide (Figure 5).⁴ Hospitalizations for long-term complications (renal, eye, neurological, circulatory, or complications not otherwise specified) are decreasing (Figure 6). Another complication of diabetes is lower extremity amputations that result from nerve damage and poor blood circulation causing foot ulcers that can quickly worsen. Fortunately, proper diabetes management and careful foot care can prevent foot ulcers and amputations. Figure 7 shows rates for Santa Cruz County and California.



Sources

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- (2) CDPH. Center for Health Statistics and Informatics. Vital Statistics Query System. <http://www.apps.cdph.ca.gov/vsq/>
- (3) *The Dartmouth Atlas of Health Care*. Hospital Discharges." <http://www.dartmouthatlas.org/data/region/profile.aspx?loc=299&tab=15>
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- (5) American Diabetes Association. "The Cost of Diabetes." Edited June 22, 2015. <http://www.diabetes.org/advocacy/news-events/cost-of-diabetes.html> [Accessed on August 7, 2015]
- (6) Diabetes Care Project. "Diabetes Fast Facts." <http://www.diabetescareproject.org/diabetes-fast-facts.html>. Accessed August 27, 2015.

HEALTH-RELATED QUALITY OF LIFE

Health-Related Quality of Life (HRQOL) is a measure of a person's perception of their own physical and mental health. The CDC validated a compact set of measures to assess HRQOL, known as the "Healthy Days Measures." They assess a person's sense of well-being based on four measures: 1) self-rated health, 2) number of recent days when physical health was not good, 3) number of recent days when mental health was not good, and 4) number of recent days when activities were limited because of poor physical or mental health ("recent" is defined as within the last 30 days).

SELF-RATED GENERAL HEALTH

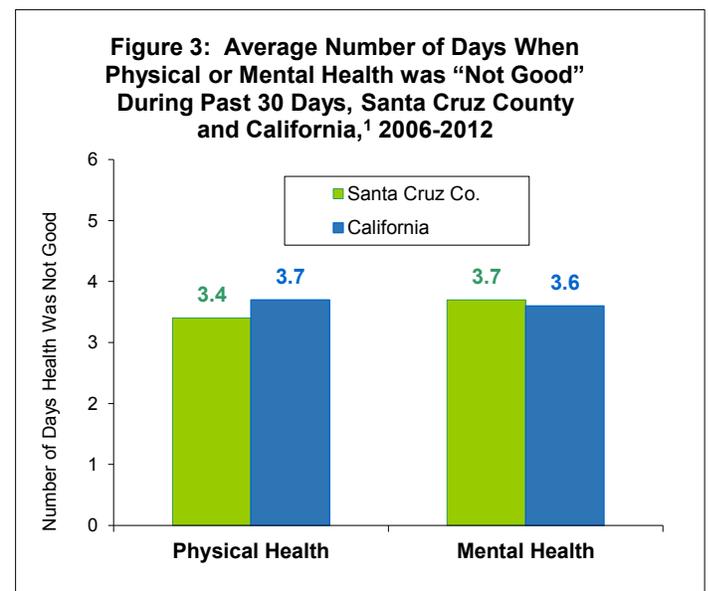
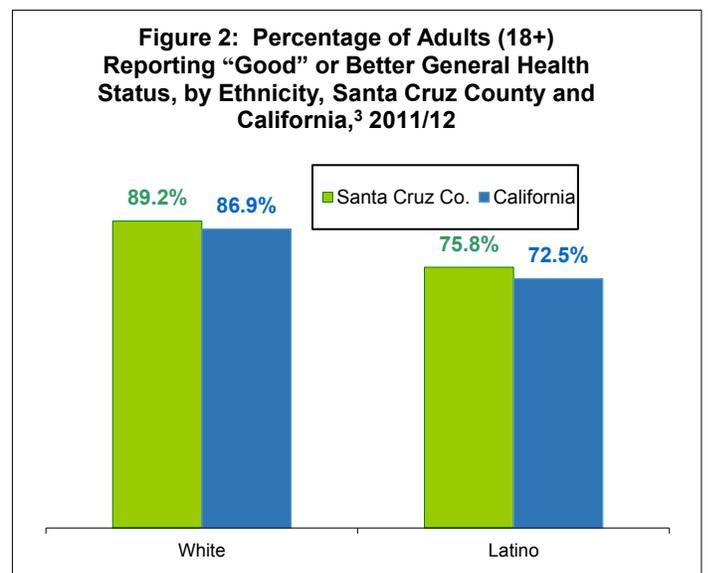
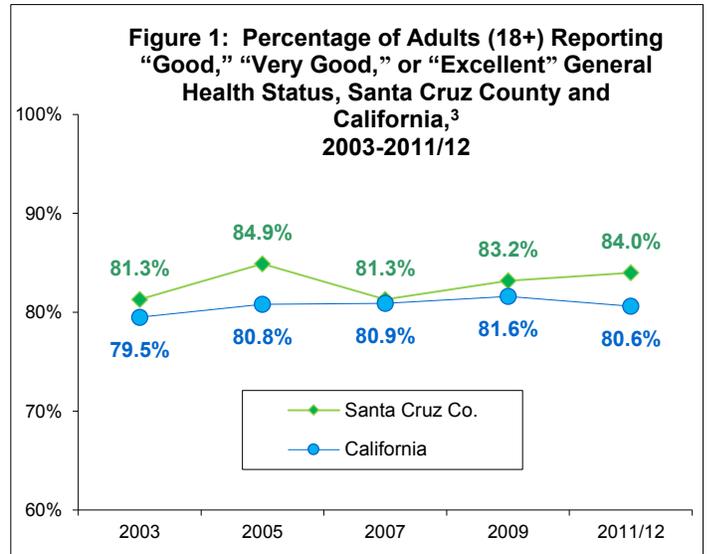
Since 1993, CDC's Behavioral Risk Factor Surveillance System (BRFSS) national survey has included these questions. BRFSS asks people, "In general, would you say that your health is excellent, very good, good, fair, or poor?" From 2006 to 2012, on average, 83.6% of adults in Santa Cruz County said their health was good, very good, or excellent, compared to 81.5% of adults statewide.¹ National data for 2006 through 2010, the most recent years accessible, were similar to Santa Cruz County data.²

This question is also asked regularly through the statewide California Health Interview Survey³ (CHIS), and again, Santa Cruz County consistently fares a little better than California (see Figure 1). However, both locally and statewide there was a significantly lower good-health percentage among Latinos than among Whites (see Figure 2).

In 2011 the CAP survey⁴ added the question about general health. In 2013, CAP similarly found that 82.5% of adults reported good (or better) general health. However, Latinos again were significantly less likely than Whites to report good or better general health (69.2% versus 87.0%).

PHYSICAL HEALTH

BRFSS asks respondents on how many of the past 30 days their physical health was not good. From 2006 to 2012, Santa Cruz County residents reported an average of 3.4 days, compared to 3.7 days statewide (see Figure 3). Santa Cruz County ranked in the top quartile of the state. The national average was also 3.7 days.¹



HEALTH-RELATED QUALITY OF LIFE

MENTAL HEALTH

BRFSS also asks, “Thinking about your mental health, which includes stress, depression, and problems with emotions, for how many days during the past 30 days was your mental health not good?” Santa Cruz County residents reported an average of 3.7 days, compared to 3.6 days statewide, from 2006 to 2012 (see Figure 3). The national average was 3.5 days.¹

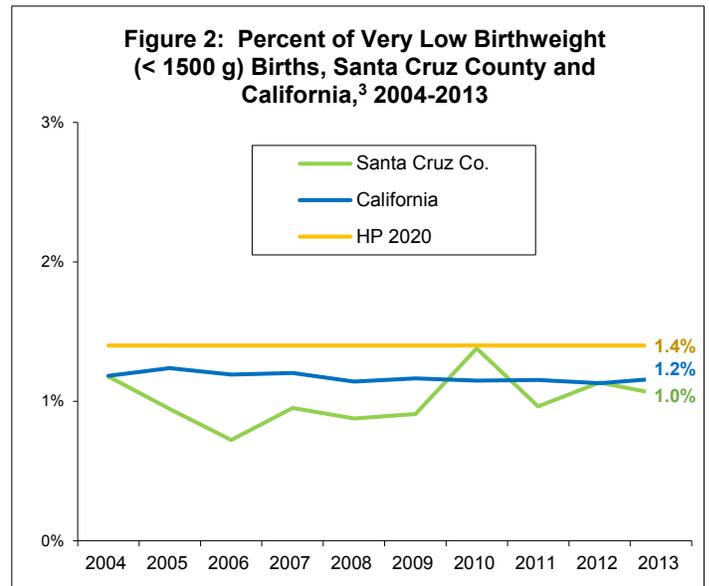
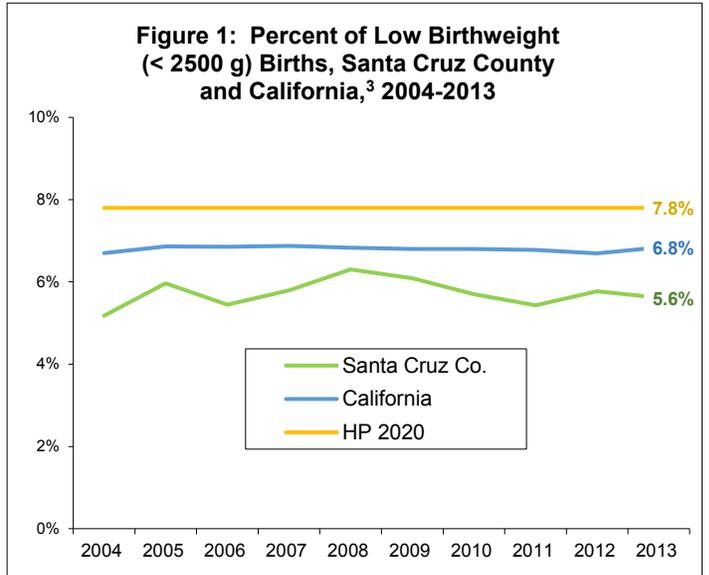
Sources	<p>(1) National Center for Health Statistics, Health Indicators Warehouse. Accessed May 12, 2015. http://www.healthindicators.gov/Indicators/Fair-or-poor-health-adults-percent_5/Profile/ClassicData.</p> <p>(2) Health-Related Quality of Life, BRFSS Trend Data. Accessed May 12, 2015. http://apps.nccd.cdc.gov/HRQOL/</p> <p>(3) California Health Interview Survey. UCLA Center for Health Policy Research. Accessed March 2015. http://www.chis.ucla.edu/.</p> <p>(4) Applied Survey Research. <i>Community Assessment Project Report: Year 18 (2012)</i>. http://www.appliedsurveyresearch.org/storage/database/quality-of-life/santacruzcap/cap18_2012/CAP_Year18_CompleteReport.pdf.</p>
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LOW BIRTHWEIGHT

Low birthweight (LBW) reflects both the infant's current and future morbidity, as well as maternal exposure to health risks.¹ For the infant, LBW indicates whether a child has had a “healthy start” because LBW is a predictor of mortality and morbidity over the life course. For example, LBW has been associated with developmental and growth problems, a higher risk of cardiovascular disease later in life, and a greater rate of respiratory illnesses. Maternal exposures of concern include the mother's health behaviors, access to health care, and the social and economic environment to which she is exposed.

The primary cause of a low birth weight is premature birth since the baby had less time to grow and gain weight. Another cause of LBW is intrauterine growth restriction (IUGR), which occurs when the baby does not grow well during pregnancy which may be due to the mother's health, placental problems, or birth defects.² Full-term babies with IUGR may be physically mature, but tend to be small and have poor health outcomes. Premature infants with IUGR are both very small and physically immature. Smaller infants have a more difficult time eating, gaining weight, fighting infections, and meeting developmental milestones. Other factors associated with LBW include race, mother's age, multiple births (e.g. twins), and mother's health.² Prenatal care is a key factor in preventing premature and LBW births.

Both Santa Cruz County and the state had better LBW rates than the Healthy People 2020 Objective over the past ten years (Figure 1).³ Very low birthweight (VLBW) rates are more variable at the county level, due to small numbers, but state rates are more stable, and both have consistently been lower than the Healthy People 2020 Objective (Figure 2).



Sources	<p>(1) County Health Rankings and Roadmaps. BIRTH OUTCOMES. http://www.countyhealthrankings.org/health-outcomes/birth-outcomes.</p> <p>(2) Lucile Packard Children's Hospital at Stanford. Low Birthweight. http://www.lpch.org/DiseaseHealthInfo/HealthLibrary/hrnewborn/lbw.html.</p> <p>(3) California Department of Public Health. Center for Health Statistics and Informatics. Vital Statistics Query System. http://www.apps.cdph.ca.gov/vsq/</p>
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NONFATAL INJURIES

Nonfatal injuries are responsible for disability, lost productivity, pain and suffering, and increased medical costs. They also serve as an indicator of risk for fatal injuries which is the leading cause of death for people ages 1 to 44.¹ A nonfatal injury is defined as bodily harm resulting from severe exposure to an external force or substance (mechanical, thermal, electrical, chemical, or radiant) or a submersion. This bodily harm can be unintentional or violence-related (intentional). The intention of the injury is determined based on whether an injury was caused by an act carried out on purpose by oneself or by another person(s), with the goal of injuring or killing. The most common type of nonfatal injuries are unintentional.

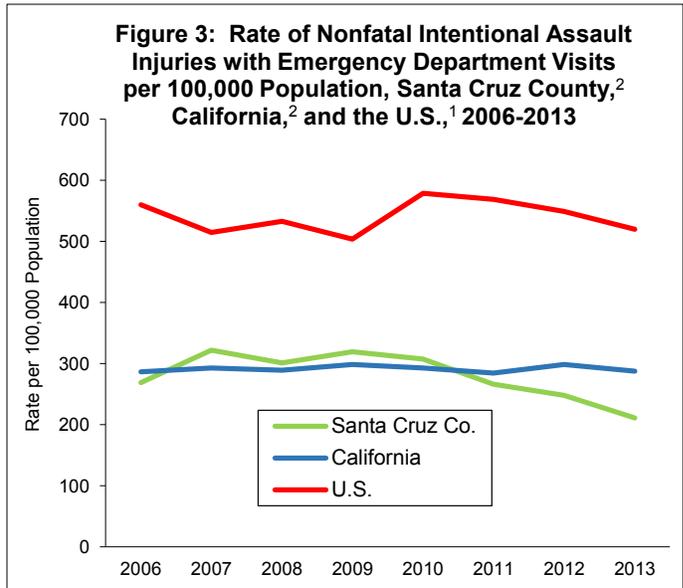
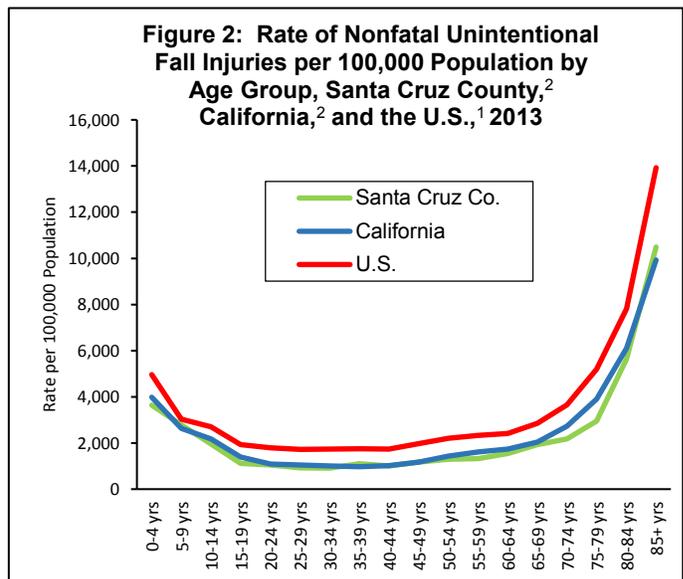
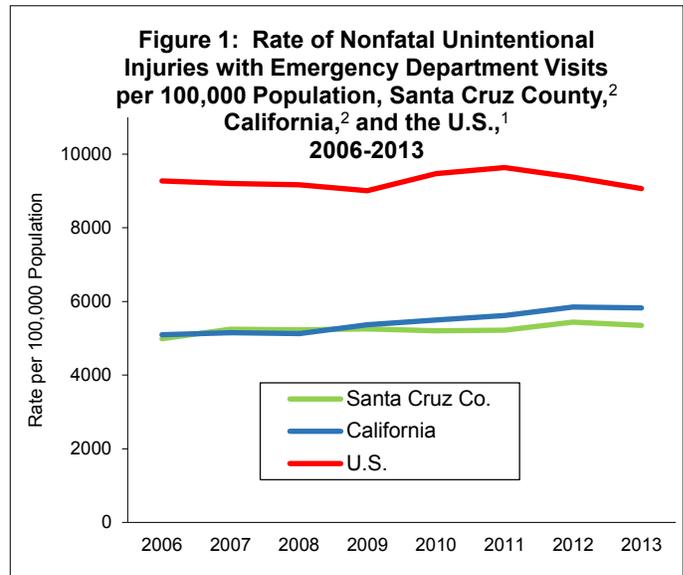
UNINTENTIONAL

Unintentional injuries or poisonings are those that are not inflicted by deliberate means (i.e., not on purpose). This category includes those injuries and poisonings described as unintended or “accidental,” regardless of whether the injury was inflicted by oneself or by another person. The data also includes when no clear indication of intent to harm was documented in the Emergency Department record.

Between 2006 and 2013, unintentional injury rates decreased nationwide, but increased 7% countywide and 14% statewide (Figure 1). Falls accounted for one-third of unintentional injuries statewide, and actually increased 23% from 2006 to 2013. Falls are much more common among older persons (Figure 2). While many categories of unintentional injuries decreased, motor vehicle traffic / bicycle accidents increased 58% (from 15.8 to 25.0 per 100,000 between 2006 and 2013).²

INTENTIONAL

Intentional injuries or poisonings are inflicted by deliberate means. This category includes assault, legal intervention (i.e., injury caused by police or other legal authorities during law enforcement activities), and self-harm categories. Assault is defined as either confirmed or suspected injury from an act of violence where physical force by one or more persons is used with the intent of causing harm, injury, or death to another person, or an intentional poisoning by another person. Figure 3 shows assault rates between 2006 and 2013; rates decreased nationally and locally, but have remained stable statewide.

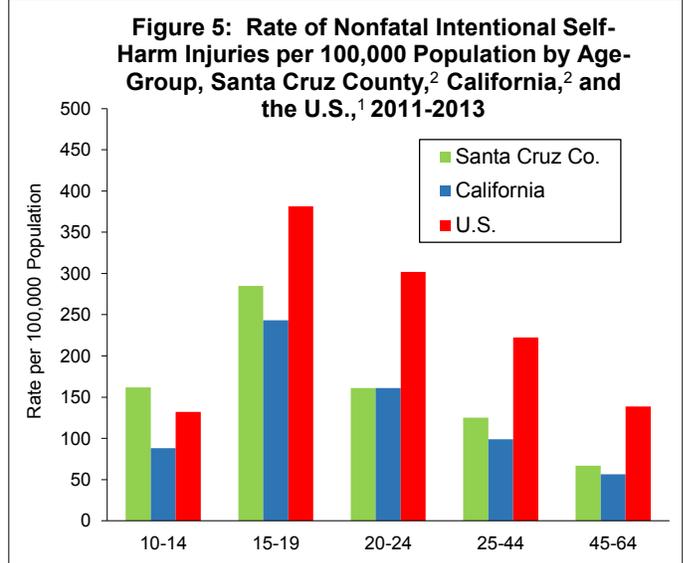
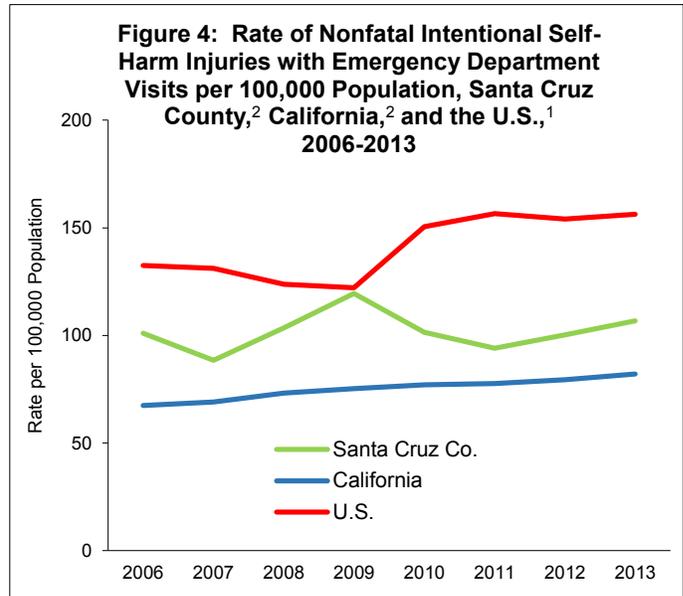


NONFATAL INJURIES

Self-harm nonfatal intentional injuries are also considered suicide attempts. Santa Cruz County has much higher rates than the rest of the state, but not as high as the nation (Figure 4). However, when examining the data by age range, Santa Cruz County self-harm nonfatal injuries are higher than state and national levels for persons age 10-14 between the years 2011 and 2013 (Figure 5).

Suicide is considered a major, preventable public health problem, and it is the second leading cause of death among teens 15-19 nationwide.³ While self-inflicted injury is considered a risk factor for suicide, many young people engage in self-harm without intent to die, and most youth who hurt themselves do not seek treatment. Screening, early identification and access to services are critical to preventing and reducing mental health problems. Policy options that could promote emotional health and prevent self-inflicted injuries among youths include:

- Setting school policies that foster a positive, caring environment and promote student engagement in school; and supporting comprehensive K-12 education for social-emotional learning, including problem-solving and coping skills
- Supporting public education and awareness campaigns to reduce the stigma associated with mental health problems and increase knowledge of warning signs; this could include “mental health first aid” training for wide-ranging audiences, focusing on how to recognize early signs, provide non-professional support, and help youth access community resources
- Ensuring that all youth with mental health needs have access to high-quality, culturally appropriate services; as part of this, expanding the workforce of qualified mental health professionals.



Sources	<p>(1) CDC. National Center for Injury Prevention and Control. Division of Analysis, Research, and Practice Integration NEISS All Injury Program operated by the Consumer Product Safety Commission for numbers of injuries. Bureau of Census for population estimates.</p> <p>(2) California Department of Public Health, Safe and Active Communities Branch. California Office of Statewide Health Planning and Development, Emergency Department Data.</p> <p>(3) Kidsdata.org. "Suicide and Self-Injury: Why this topic is important." http://www.kidsdata.org/topic/34/suicide-and-self-inflicted-injury/summary</p>
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COMMUNICABLE DISEASES

The source of Santa Cruz County's data for communicable diseases is the mandated reports from health care providers and laboratories.¹

TUBERCULOSIS

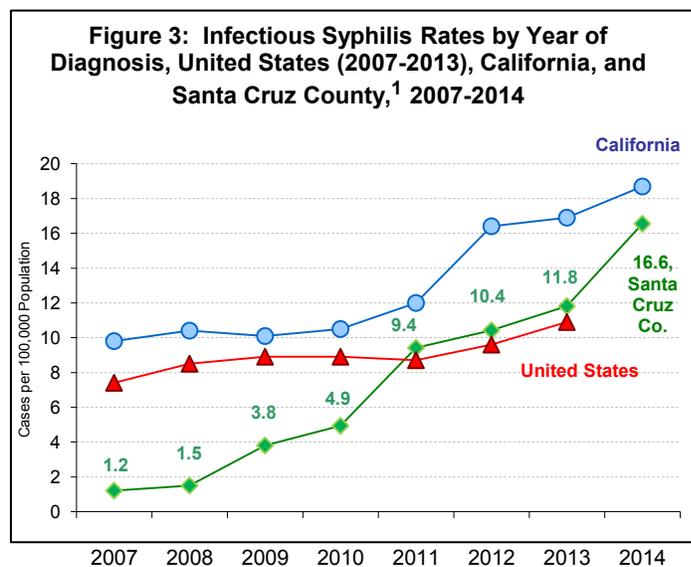
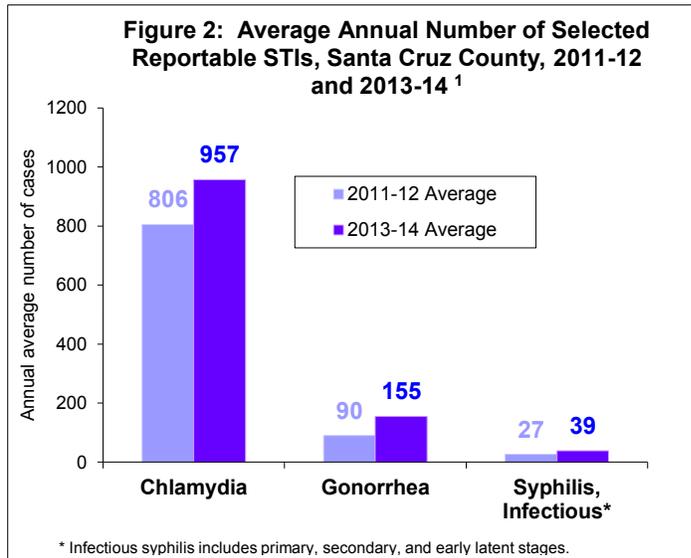
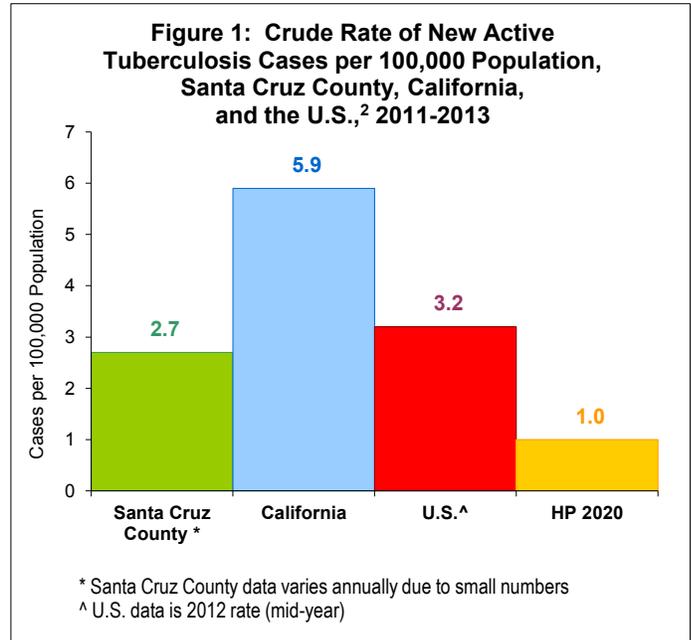
Tuberculosis (TB) is caused by airborne bacteria, and has been infecting humans for thousands of years. In Santa Cruz County, there was an average of 7 active TB cases each year between 2011 and 2013, for an incidence rate of 2.7 per 100,000 population. The statewide and nationwide rates were 5.9 and 3.2 per 100,000, respectively (Figure 1).²

The majority of people with TB in Santa Cruz County were born outside of the United States, but about 25% were born in the United States. Over the past couple of years, about 15% of TB cases have been homeless, adding significant costs during periods of isolation. The number of active cases does not fully reflect the workload that tuberculosis imposes on public health agencies. There are at least 10 to 20 times as many persons who need some level of follow-up to rule out active tuberculosis, and case and contact management are very labor intensive. Studies have consistently shown that the resources spent on TB are necessary to keep TB under control.

SEXUALLY TRANSMITTED INFECTIONS

Sexually transmitted infections (STIs) account for the largest number of reported diseases among Santa Cruz County residents. Chlamydia, gonorrhea and syphilis have all increased from 2011-12 to 2013-14 – with gonorrhea increasing 72% (Figure 2).¹

Syphilis has increased every year over the past few years (Figure 3). The increasing trend can be seen far and wide; in fact, news articles can be found monthly describing another state or country experiencing increasing rates of syphilis. Some have hypothesized the increase is due to condom fatigue and easier access to new partners through smart phone dating applications. On April 23, 2015, Dr. Gail Bolan, director of the CDC's Division of STD Prevention, announced an "epidemic of syphilis" among gay males that began in 2008.³ This is consistent with Santa Cruz County syphilis data, with the majority (75%) being males who have sex with males.



COMMUNICABLE DISEASES

HIV & AIDS

HIV is costly to treat, preventable, and a very complex health issue. Homophobia and stigma contribute to poor mental health and unhealthy behaviors, such as substance abuse, risky sexual behaviors, and suicide attempts. The majority of infections are among men who have sex with men (MSM). As of the end of 2014, 443 Santa Cruz County residents were known to be living with HIV; 280 (63%) of them also have AIDS.³ Between 2010 and 2014, there was an average of 18 new HIV cases each year (6.9 new cases per 100,000 population); see Figure 4. Of the new HIV cases diagnosed between 2010 and 2014, one-third were diagnosed with AIDS within a year of their HIV diagnosis. These persons are known as late HIV diagnoses, and tend to have limited HIV education, poor access to HIV testing, and are often MSM and do not identify as gay or bisexual.

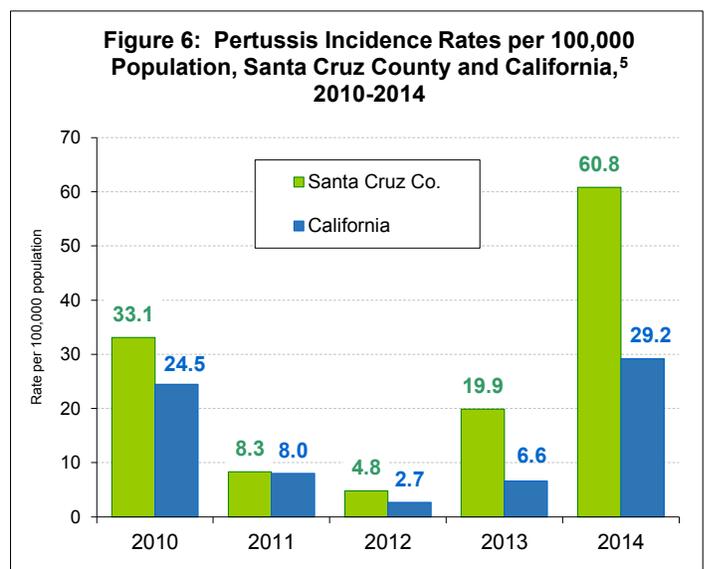
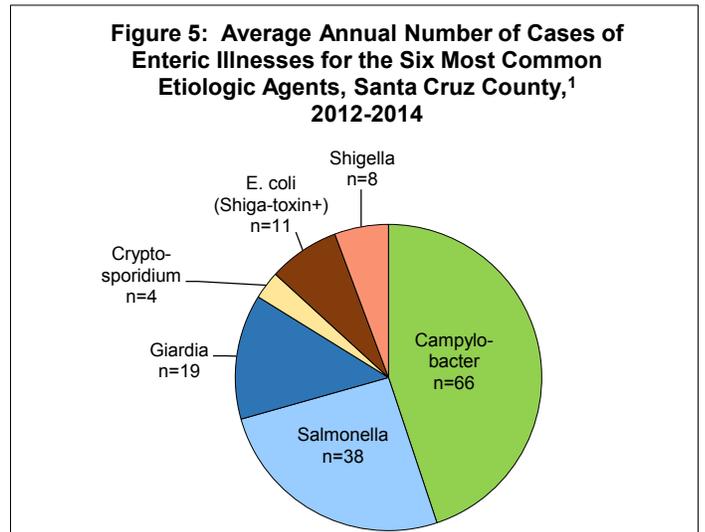
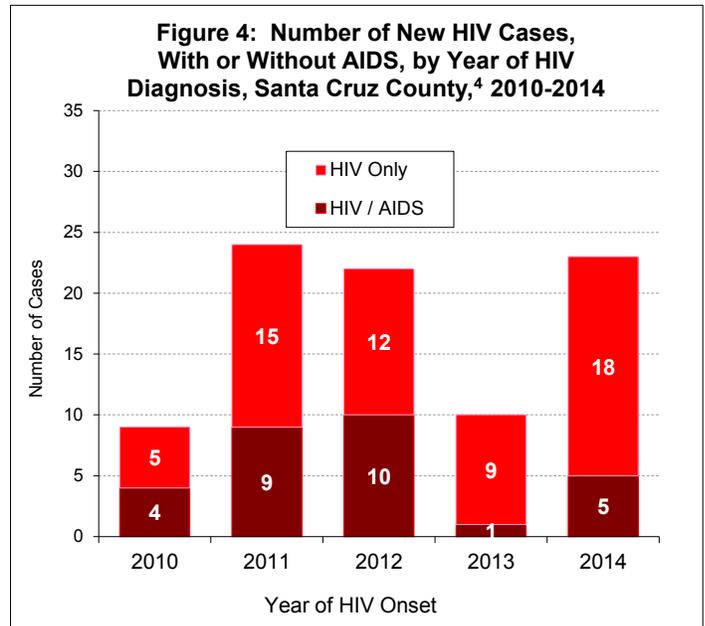
ENTERICS

Enteric (intestinal) illnesses enter the body through the mouth and are usually spread through contaminated food and water or by contact with vomit or feces. Locally, the top six infectious agents causing enteric illnesses between 2012 and 2014 caused nearly 150 reportable cases per year (see Figure 5 for the top six conditions and their relative contributions to the case counts).¹

Cases with enteric illnesses are investigated by the Communicable Disease (CD) Unit to identify potential sources of illness and prevent further spread in the community. Prevention includes identifying cases who work in sensitive occupations, such as a restaurant; such persons are often restricted from working until they are no longer contagious.

VACCINE PREVENTABLE DISEASES

Disease prevention is the key to public health. Vaccines prevent disease in two ways: directly, in the people who receive them, and indirectly, by reducing the number of infected people who could otherwise transmit infection. California experienced a pertussis epidemic in 2014. Pertussis is cyclical and peaks every 3-5 years as the numbers of susceptible persons in the population increases due to waning immunity after disease or vaccination. See the state and county pertussis rates in Figure 6.



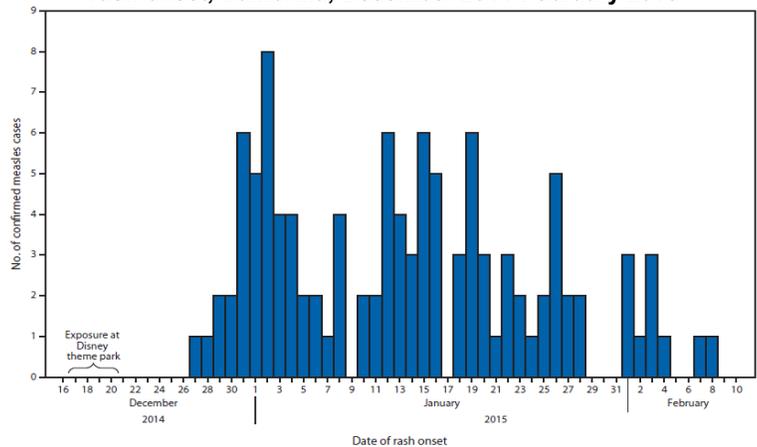
COMMUNICABLE DISEASES

In December 2014, a large outbreak of measles occurred in California. There were 40 cases acquired at Disneyland, and additional secondary cases were identified in six other states. Overall, there were 110 cases associated with the Disneyland outbreak (Figure 7). Among the vaccine eligible, 67% were intentionally unvaccinated due to personal beliefs.⁶ Santa Cruz County managed 3 measles cases in 2013 which included assessing hundreds of contacts needing to be evaluated to prevent further spread. For local vaccination rates, go to the Immunization chapter.

OUTBREAKS

Between 2011 and 2014, the Santa Cruz County CD Unit reported 49 disease outbreaks.¹ Sixty percent of those were acute gastroenteritis illness, or sudden onset of diarrhea and/or vomiting. See Table 1 for the numbers of outbreaks and combined numbers ill by type of disease in 2014. Acute gastroenteritis and respiratory infections are often very contagious, as can be seen by the number ill.

Figure 7: Number of Confirmed Measles cases (n=110) by date of rash onset, California, December 2014-February 2015⁶



**Table 1:
Outbreaks by Type and Number Ill, Santa Cruz County, 2014¹**

Type	# of locations	Combined # ill
Acute Gastroenteritis	12	413
Respiratory	4	48
Total	16	461

Sources

- (1) County of Santa Cruz, Public Health Department, Communicable Disease Unit (unpublished data). Accessed through CalREDIE on April 22, 2015.
- (2) California Department of Public Health and the California Conference of Local Health Officers. County Health Status Profiles 2015. <https://www.cdph.ca.gov/programs/ohir/Documents/OHIRProfiles2015.pdf>. April 2015.
- (3) Starr, Penny. "CDC Official: We're Seeing 'Epidemic of Syphilis' Among Gay Men." Cnsnews.com 23 Apr. 2015.
- (4) California Department of Public Health, Office of AIDS. eHARS Data File for Santa Cruz County, 1st Quarter, 2015 (unpublished).
- (5) California Department of Public Health. Pertussis Summary Report: April 20, 2015. <http://www.cdph.ca.gov/programs/immunize/Documents/Pertussis%20report%204-20-2015.pdf>
- (6) CDC. Morbidity and Mortality Weekly Report. "Measles Outbreak - California, December 2014-February 2015" Feb. 20, 2015. 64 (60); 153-154. http://www.cdc.gov/mmwr/preview/mmwrhtml/mm6406a5.htm?s_cid=mm6406a5_w

CHRONIC DISEASES

Chronic diseases are the leading cause of death and disability in the United States; they are also the most common and preventable conditions.¹ Seven of the top 10 causes of death in 2010 in the U.S. were due to chronic diseases; for more information on chronic disease mortality, see the Mortality chapter.

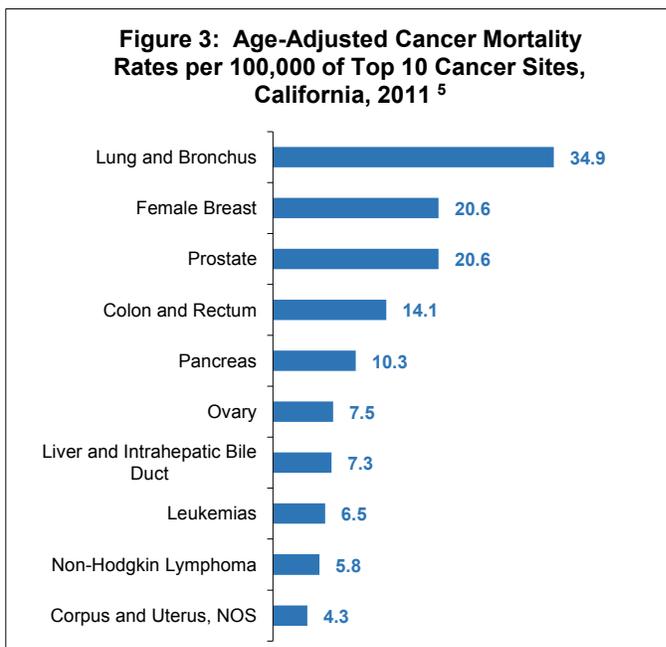
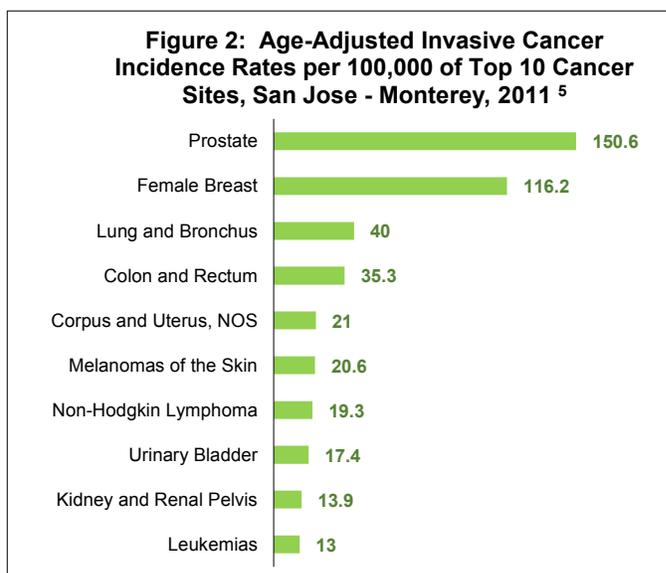
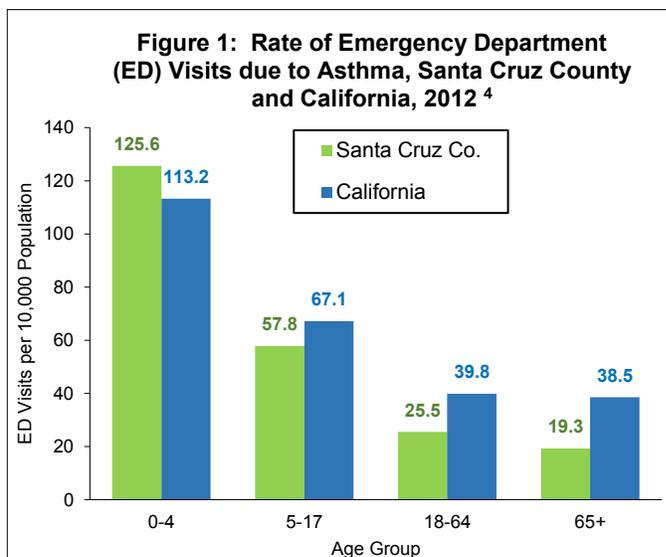
About half of all American adults are living with at least one chronic condition.¹ Most chronic diseases are attributable to a short list of modifiable risk factors: high blood pressure, tobacco use, obesity, physical inactivity, excessive alcohol use, and poor diet (see the Behaviors chapter for more data).² Fortunately, addressing the same risk factors can also serve as strategies to lessen the burden of chronic disease. The risk factors must be addressed at two levels: the individual level (including healthcare interventions) and the population level (policies and environments that promote health). This chapter summarizes the burden of some of the common chronic diseases.

ASTHMA

Asthma is a chronic inflammatory lung condition characterized by irregular periods of breathlessness, wheezing, coughing, and chest tightness.³ Some factors associated with development of asthma or triggering of asthma attacks are: tobacco smoke exposure (either active smoking or secondhand smoke), obesity, poverty, and unemployment. In 2012, Santa Cruz County had fewer asthma-related Emergency Department (ED) visits compared to the state, 37.7 per 10,000 population compared to 49.8, respectively.⁴ However, by age group, the 0-4 years olds in Santa Cruz County had a higher ED visit rate than the state (Figure 1). The Santa Cruz County hospitalization rate for asthma was lower than the state for all age groups in 2012, 5.1 per 10,000 population compared to 8.6, respectively. Racial inequities persist locally and statewide, with blacks having a higher ED visit rate than other racial and ethnic groups.

CANCER

Cancer is the second leading cause of death in the United States, exceeded only by heart disease.⁵ Cancer is a term used to describe uncontrolled cell growth. Cancer is not just one disease but many. Figure 2 shows the incidence of invasive cancer for the top 10 cancer sites in the San Jose - Monterey area (which includes Santa Clara, San Benito, Santa Cruz and Monterey counties). Figure 3 shows mortality rates of the top 10 cancer sites for the entire state (local rates are not available).



CHRONIC DISEASES

DIABETES

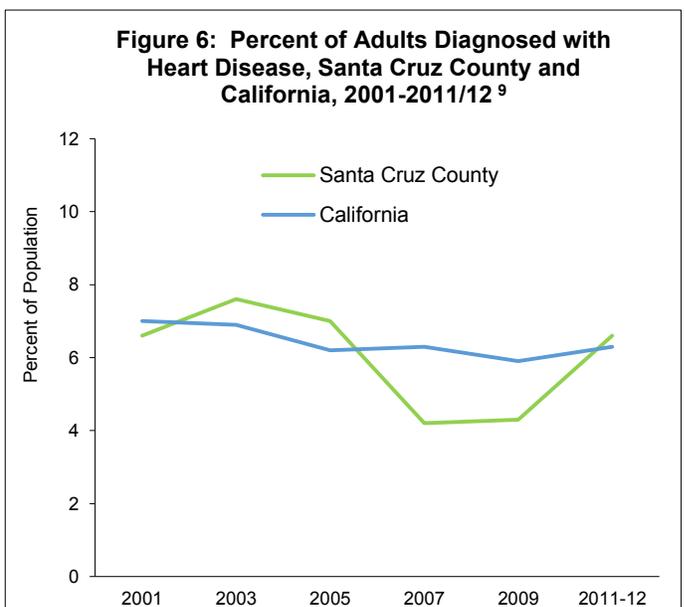
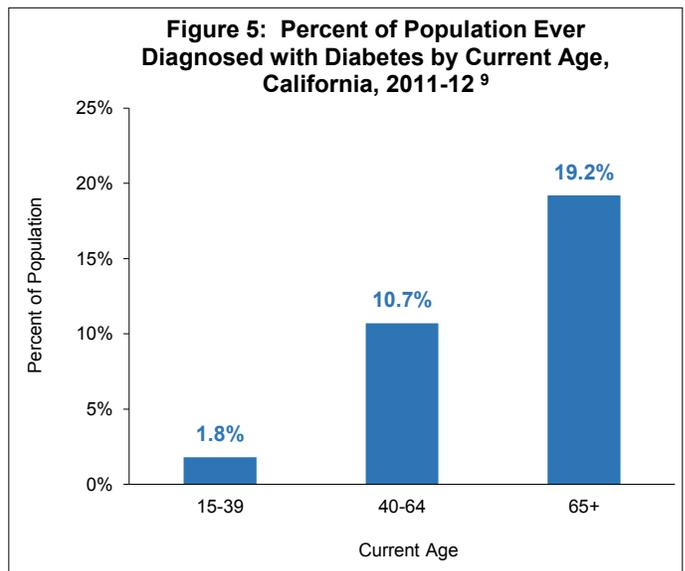
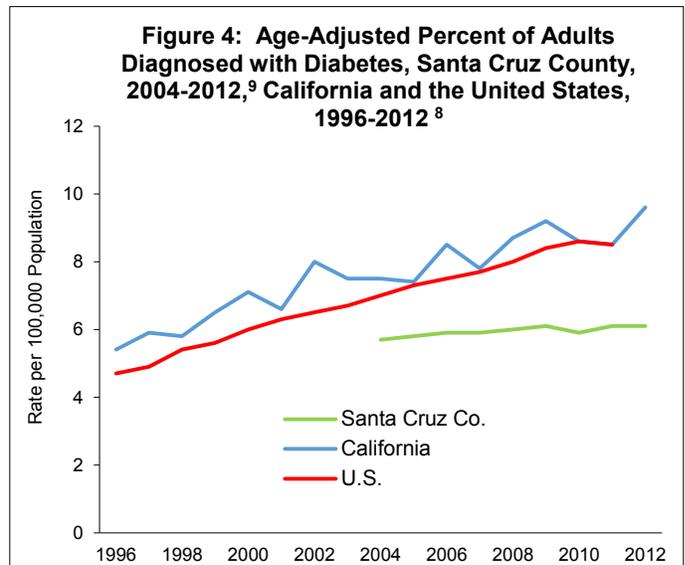
Diabetes is a disease in which blood glucose levels are above normal. The build up of sugar in the blood can cause serious health complications, such as: blindness, heart disease, kidney failure, and lower extremity amputations. In the United States, two people die of diabetes-related causes and 16 adults are newly diagnosed, every five minutes.⁶ Diabetes is the 7th leading cause of death in the United States. The CDC estimates that 9.3% of U.S. adults have diabetes and that an additional 27.8% of adults are not yet diagnosed. Medical expenditures for people with diabetes are 2.3 times higher than for those without diabetes.⁷

The percentage of adults with diabetes in the U.S. increased more than 80% between 1996 and 2011 (Figure 4).⁸ Fortunately, rates in Santa Cruz County have been more stable. However, the prevalence has been increasing slightly with approximately 300 adults newly diagnosed annually which does not include the large portion of those not yet diagnosed.⁹ In California, the rate of type 2 diabetes increases with age similar to the U.S. (Figure 5).

HEART DISEASE

Heart disease is the leading cause of death in the U.S., and accounts for 1 of every 4 deaths. The term "heart disease" refers to several types of heart conditions. Coronary artery disease (CAD) is the most common in the United States and can cause myocardial infarctions, angina, heart failure and arrhythmias. CAD occurs when plaque (or cholesterol) builds up in the arteries causing them to narrow – a condition called atherosclerosis.

In 2011-2012, 24% of Santa Cruz County adults (age 20 years and older) reported a diagnosis of high blood pressure which is a precursor to heart disease.⁹ During the same time frame, 6.6% of adults in Santa Cruz County reported they had been diagnosed with heart disease, compared to 6.3% statewide (Figure 6). Even though the Santa Cruz County rates appear to fluctuate, the values are ranging within an expected amount of normal variation due to sample size. The state numbers are more stable, and the 2011-2012 rate of 6.3% was significantly less than the 2001 rate of 7.0%.



CHRONIC DISEASES

Sources	<p>(1) CDC. Chronic Disease Prevention and Health Promotion. "Chronic Disease Overview." http://www.cdc.gov/chronicdisease/overview/index.htm</p> <p>(2) CDC. Chronic Disease Prevention and Health Promotion. "The Four Domains of Chronic Disease Prevention." http://www.cdc.gov/chronicdisease/pdf/four-domains-factsheet-2015.pdf</p> <p>(3) Milet M, Tran S, Eatherton M, Flattery J, Kreutzer R. The Burden of Asthma in California: A Surveillance Report. Richmond, CA: California Department of Health Services, Environmental Health Investigations Branch, June 2007.</p> <p>(4) California Breathing. "Santa Cruz County Asthma Profile." Data originally from OSHPD. http://californiabreathing.org/asthma-data/county-asthma-profiles/santa-cruz-county-asthma-profile#riskfactorsdiv</p> <p>(5) U.S. Cancer Statistics Working Group. <i>United States Cancer Statistics: 1999–2011 Incidence and Mortality Web-based Report</i>. Atlanta: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention and National Cancer Institute; 2014. Available at: www.cdc.gov/uscs.</p> <p>(6) CDC. Diabetes. http://www.cdc.gov/diabetes/basics/index.html</p> <p>(7) American Diabetes Association. "Economic Costs of Diabetes in the U.S. in 2012." <i>Diabetes Care</i> 2013; 36:1033-1046</p> <p>(8) CDC. National Diabetes Surveillance System. http://gis.cdc.gov/grasp/diabetes/DiabetesAtlas.html</p>
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MORTALITY

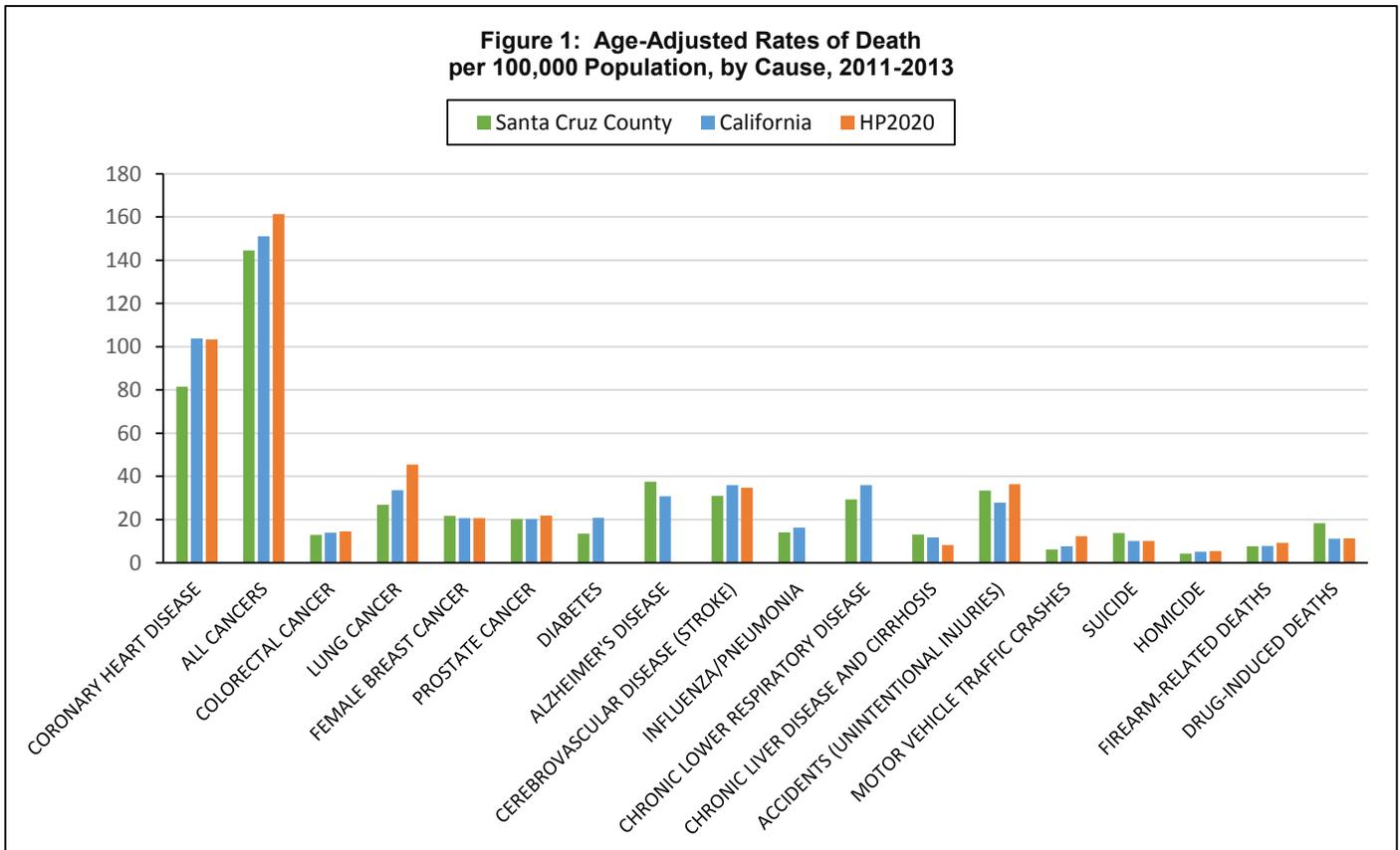
The mortality rate is one of the fundamental measures of the health of a population. Examining the frequencies of the various causes of death in a population can help identify opportunities for intervention to reduce illness, injury, and death.

In Santa Cruz County, the age-adjusted rate of death from all causes for the period 2011 through 2013 was 625.9 deaths per 100,000 population.¹ This was better than the state rate of 641.1 deaths per 100,000,² and significantly better than the national rate of about 735 per 100,000.³ The county's mortality rates were better than statewide rates for diabetes, coronary heart disease, chronic obstructive pulmonary disease, and lung cancer, reflecting our relatively low rates of smoking and obesity (Figure 1). Our rates were worse than statewide rates for drug-induced fatalities, suicides, accidents, and Alzheimer's disease. Overall mortality rates continue to drop nationwide and in the county, although statewide rates have not improved in recent years.

The leading cause of death in the United States is heart disease,³ primarily coronary heart disease. In Santa Cruz County in 2011-2013, the age-adjusted rate of death from coronary heart disease (81.6 per 100,000 population)² was significantly better than the statewide rate (103.8)² and the 2013 national rate.³ (California's County Health Status Profiles provide data on coronary heart disease, not all heart disease; the rate of death from coronary heart disease alone is considerably less than the all-cancers death rate.)

The second leading cause of death in the U.S. is cancer.³ The county's rate of death from all types of cancer combined (144.4 per 100,000)² was better than the statewide rate (151.0)² and the national rate (166.2).³

For many years, county rates of death from suicide and drug-induced injury have generally been higher than state rates, while deaths from homicide and motor vehicle accidents have tended to be quite low; these differences have generally not been statistically significant in any given three-year period, but they have remained consistent for many years.



MORTALITY

In the last 100 years, public health and medical advances such as improved sanitation, refrigeration, vaccinations, and antibiotics have greatly reduced the death toll from infectious disease. Nowadays, changes in lifestyle can substantially reduce most of the major causes of death due to chronic diseases, such as heart disease, cancer, stroke, chronic lower respiratory disease, diabetes, and cirrhosis of the liver.

The single greatest actual underlying cause of death in developed countries is tobacco.⁴ The second greatest is the combination of poor diet and physical inactivity; in the U.S., that combination threatens to overtake tobacco as the leading cause of death. The third greatest is alcohol, which contributes heavily to liver disease, to deaths by accident, homicide, and suicide, and to certain cancers. Each of these major actual causes of death involves personal lifestyle choices that are ripe for public health intervention. Reductions in tobacco and alcohol usage and improvements in diet and physical activity are keys to improving health and extending lifespans in the 21st century.

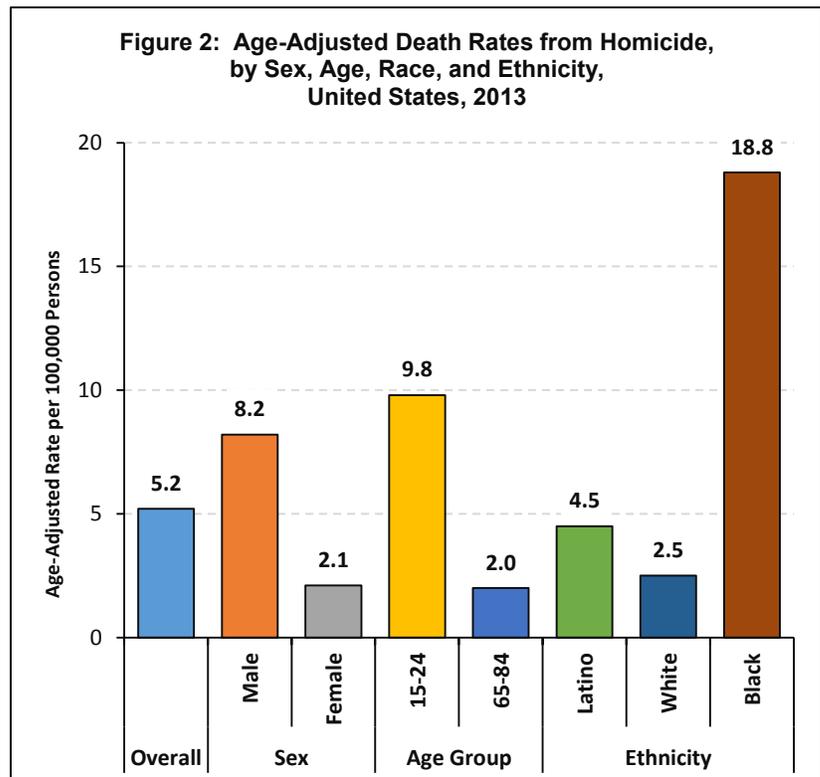
YEARS OF POTENTIAL LIFE LOST

“Years of Potential Life Lost” (YPLL) is a widely used measure of a community’s health. YPLL is the number of years of potential life lost due to premature mortality. It is measured by calculating the difference between the actual age of death and a selected age (only counting deaths occurring before the selected age); the age selected is usually either 65 or 75. For example, if the selected age was 75, then a death occurring at age 60 would contribute 15 YPLL; a death occurring at age 20 would contribute 55 YPLL. YPLL is usually presented as an age-adjusted rate of YPLL per 100,000 persons.

The National Vital Statistics System calculated the YPLL rate (with a selected age of 75) for each individual county in the United States for the years 2010-2012.^{5,6} The national YPLL rate for those years was 6622. California’s statewide rate was 5295, 5th best in the nation. Santa Cruz County ranked 18th best among all 58 California counties, with a YPLL of just 5066, much better than the national average. The county rate continues to improve, but in recent years the county’s rate has not been improving nearly as fast as the statewide rate.

HOMICIDE

The United States had an age-adjusted homicide rate of 5.2 per 100,000 in 2013,³ more than double the rate of most industrialized countries. U.S. homicide rates in 2013 were highest among Blacks (7.5 times the rate among Whites), Latinos (1.8 times the rate among Whites), males (almost 4 times the rate among females), and adolescents and young adults (almost five times the rate among the elderly) (Figure 2). Over the past 18 years, Santa Cruz County has consistently had homicide rates lower than statewide and national rates. County rates were often significantly lower, averaging not much more than half of state rates over the period shown in Figure 3.⁷ California rates have dropped considerably during that time, while the county’s rates have gone up slightly in recent years.



MORTALITY

Close to two thirds of homicides are committed by someone who knows the victim. Over two thirds of homicides are committed with firearms. Homicide rates are higher in “large central metro counties” than in “medium metro counties” (such as Santa Cruz) and other levels of urbanization.^{8,9,10}

SUICIDE

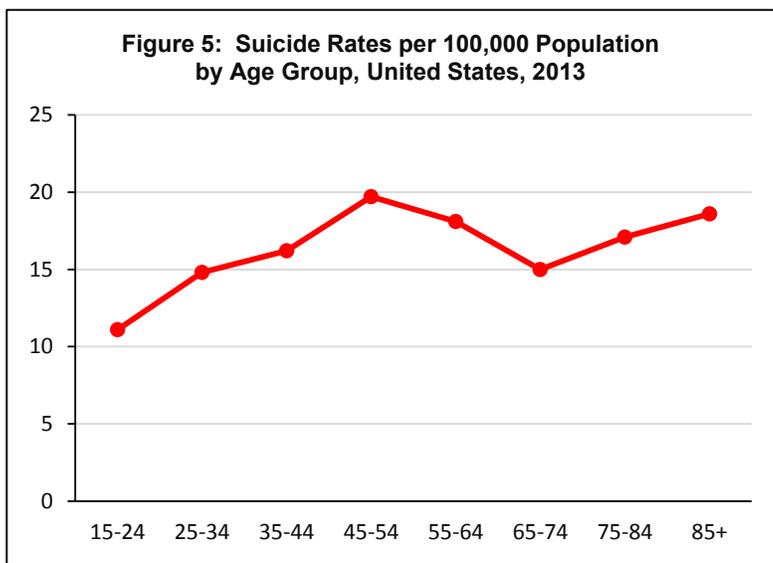
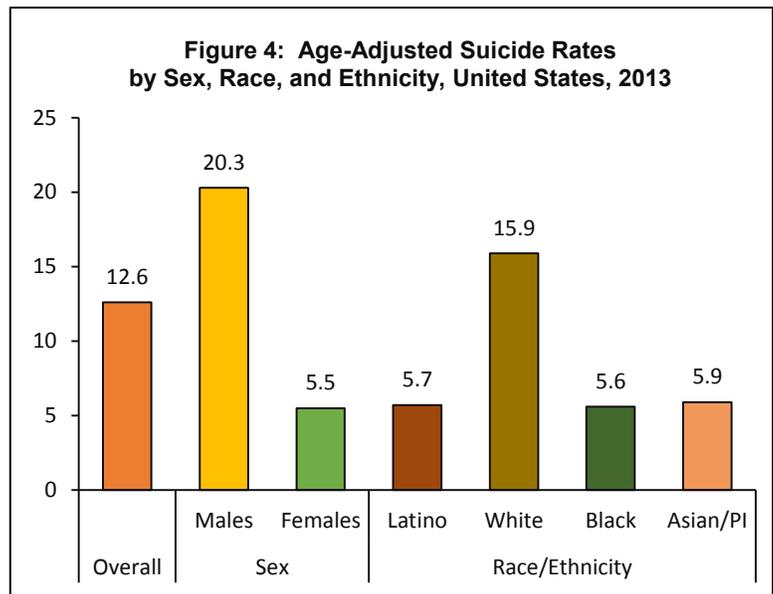
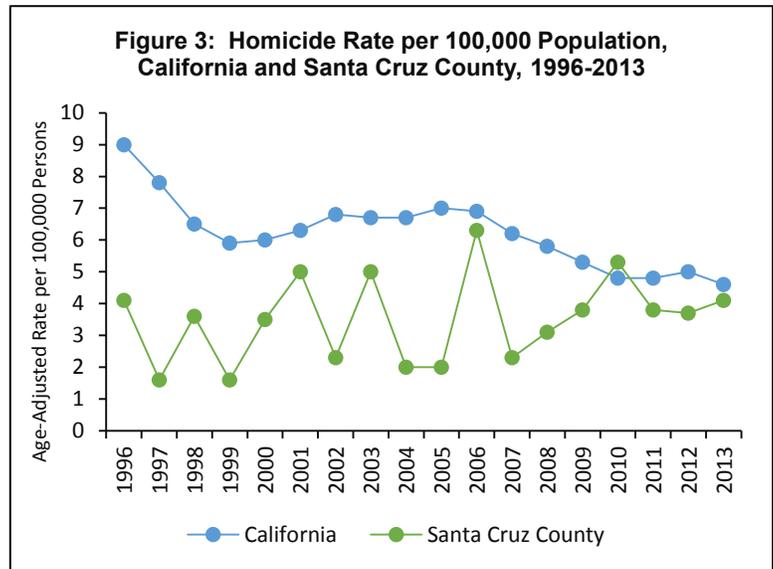
Suicide is the 10th leading cause of death nationally, taking the lives of over 41,000 Americans in 2013 – almost 1.6% of all deaths in the United States, and 2.5 times as many deaths as homicide.³

Suicide rates are strongly linked to sex, race, and ethnicity³ (Figure 4). Suicide rates are almost four times as high among men as among women (although women are more likely to *attempt* suicide). Suicide rates among Whites are almost triple those among Blacks, Asians, and Latinos.

Suicide rates vary greatly with age; the rate rises from about 10 per 100,000 in the 15-24 age group to a peak of almost 20 in the 45-54 age group, drops off in the 55-64 and 65-74 age groups, and then climbs back above 15 in the oldest age groups³ (Figure 5). Other risk factors for suicide include depression, substance abuse, availability of firearms in the home, family violence, family history of suicide or mental illness, social isolation, rural residence, stress, and lack of mental health care.

For the years 2011-13, the age-adjusted rate of death by suicide in Santa Cruz County was 13.7 per 100,000 persons,¹ compared to the statewide rate of 10.2¹ and the 2013 national rate of 12.6.³ Santa Cruz ranked 34th out of 58 California counties.¹ Santa Cruz County’s suicide rates since 1980 have consistently been higher than state rates.

Suicide *attempts* are far more frequent than actual suicides.¹¹ Although suicide rates generally increase with age, the rate of suicide *attempts* decreases with age. The number of suicide attempts compared to completed suicides may be as high as 200 to 1 among 15-to-24-year-olds, and drop to as low as 4 to 1 among adults over age 65.¹²



MORTALITY

A failed suicide attempt is one of the strongest predictors of subsequent attempts and completed suicide. Development of an effective tracking system for suicide attempts could facilitate targeted intervention that might significantly reduce the incidence of suicide.

About half of all suicides in this country involve firearms. However, in Santa Cruz County since 1991 the proportion has been lower, just over 40%. Nevertheless, reduced access to firearms would probably reduce the incidence of suicide.

Suicide is associated with depression, an illness treatable both by psychotherapy and by medication. Training physicians to identify and treat depression, and increasing the availability of mental health resources, could reduce the incidence of suicide. Other interventions could include steps to reduce substance abuse, prevent social isolation, and reduce the incidence of chronic diseases.

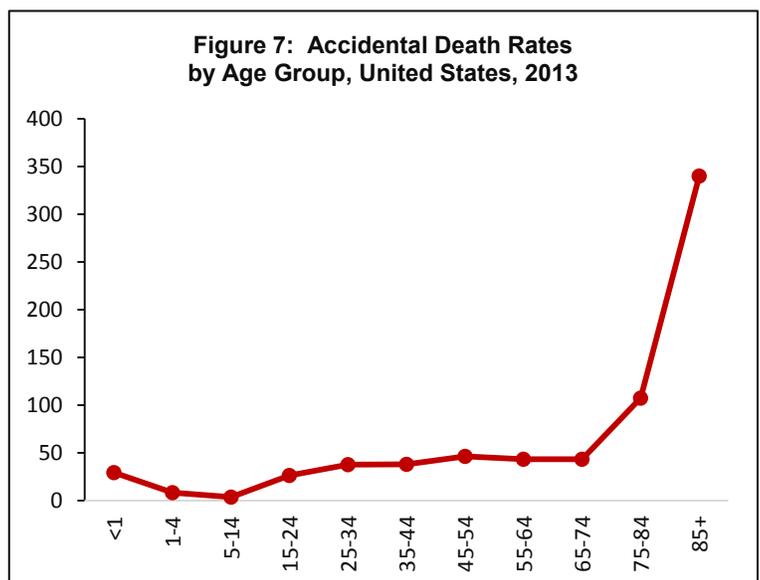
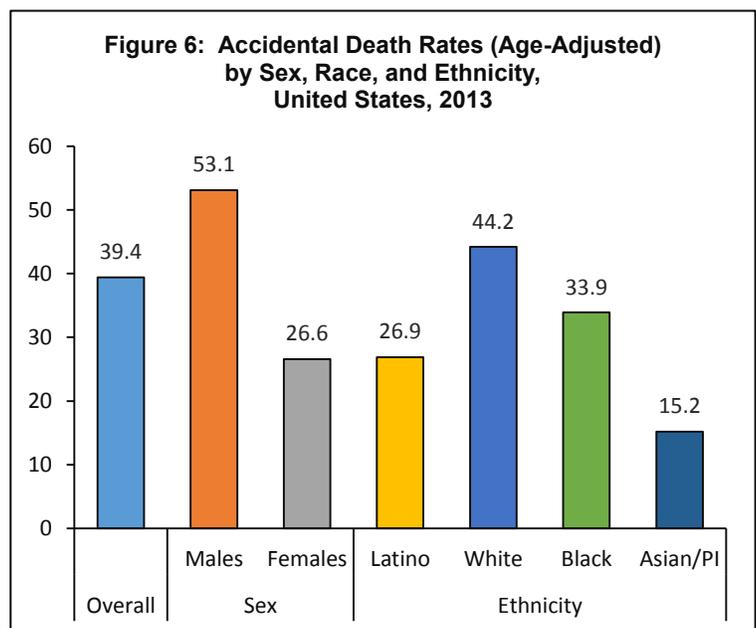
ACCIDENTS

Unintended injuries are slowly trending upward as a cause of death, and recently surpassed stroke to become the fourth leading cause of death in the United States, with an age-adjusted death rate of 39.4 per 100,000 persons, accounting for over 130,000 deaths in 2013, or 5% of all deaths.³ In 2013, males were twice as likely as females to die in accidents³ (Figure 6). Age-adjusted death rates varied strongly by race and ethnicity, with non-Latino Whites having a rate three times as high as that among Asians³ (Figure 6). Accidental death rates are very low in middle childhood and very high among the elderly³ (Figure 7). Unintended injuries are the leading cause of death in all groups below age 45.³

During the period 2011-2013, Santa Cruz County ranked 24th among California counties, with an average annual age-adjusted mortality rate from unintentional injuries of 33.4 per 100,000 persons.¹ That was better than the national rate of 39.2,³ but worse than California's rate of 27.9, and not significantly different from either one. The state and the county both met the Healthy People 2020 objective of 36.4 per 100,000.

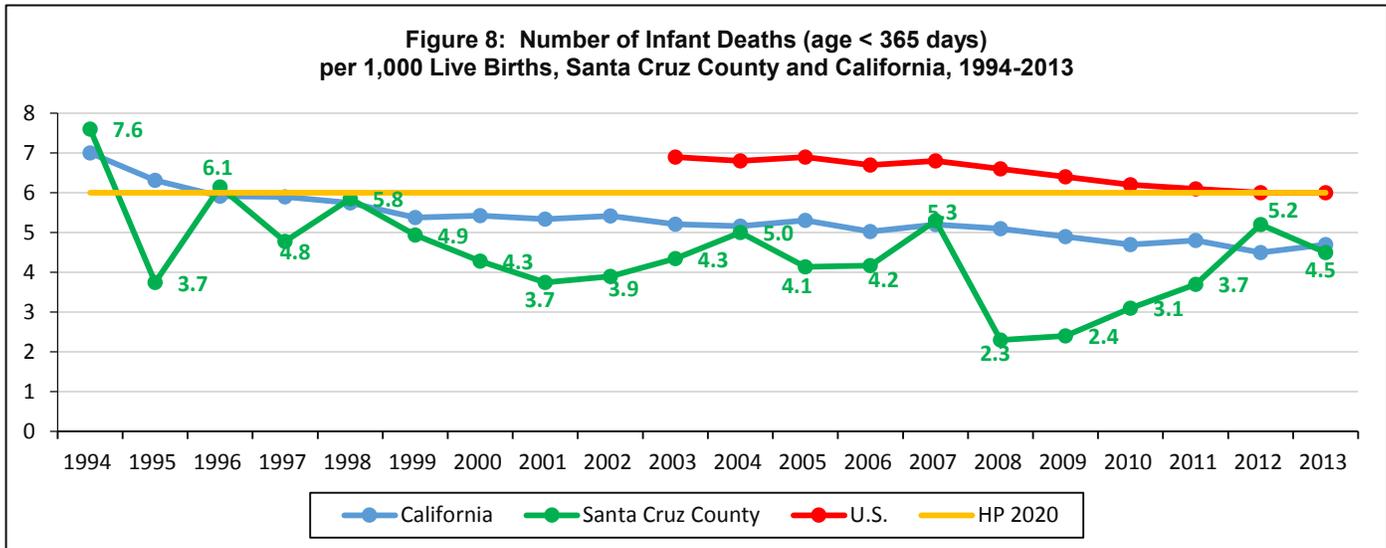
INFANT MORTALITY

Infant mortality is an important measure of a nation's health and a worldwide indicator of health status, social well-being, and availability of adequate prenatal care. Local, state, and national infant mortality rates have improved fairly steadily for many decades, although our national rates remain among the highest among all developed countries.



MORTALITY

Santa Cruz County rates are more variable (Figure 8), due to our smaller population, but show a similar improving trend.¹³ The county's rates usually are below statewide rates; they are well below national rates,³ and meet the HP2020 objective. The five leading causes of infant mortality in the U.S. in 2013 were congenital malformations (20%), disorders related to short gestation and low birth weight (18%), maternal factors and complications of pregnancy, labor, or delivery (12%), sudden infant death syndrome (8%), and accidents (5%).³



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- (6) http://www.healthindicators.gov/Indicators/Years-of-potential-life-lost-before-age-75-per-100000_3/Profile.
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