Community Health Status Report

San Luis Obispo County
Public Health Department

2011

Executive Summary

San Luis Obispo County Public Health Department is pleased to present this Community Health Status Report for San Luis Obispo County. The creation of this report was undertaken to provide an overview of some of the key community health trends in our county. We believe that one role of public health is to systematically collect, analyze, report and disseminate information about the health of the county's population to support community-driven health improvement strategies. This report contains information that can be used by health care providers, policy-makers, educators and other community members.

The primary sections of the report are (I) Community Overview, (II) Maternal, Child, and Adolescent Health, (III) Communicable and Infectious Diseases, and (IV) Leading Causes of Illnesses, Injury or Death. As much as possible, we have compared our local health status with that of the State, and when available, to the national Healthy People 2010 and Healthy People 2020 objectives. In addition to health or medically related indicators, we have also included some socio-economic factors that may influence the health status of populations.

We believe that the community is our most valuable partner in public health; therefore, we especially value your comments, questions and suggestions about the Community Health Status Report. Please send them to:

County of San Luis Obispo Public Health Department
P.O. Box 1489/2191 Johnson Avenue
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 Suggested citation: Community Health Status Report, San Luis Obispo County Public Health Department, San Luis Obispo, California, 2011.

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Community Profile

Geography: San Luis Obispo County, one of California's 27 original counties created in 1850, is located along the Pacific Coast, approximately 200 miles north of Los Angeles and 235 miles south of San Francisco. Most of the county's 3,326 square miles are unincorporated. The majority of residents live along the coast or along the corridor of Highway 101. The eastern region is sparsely populated with vast areas of agricultural and government lands between small, unincorporated towns. This region will soon house two solar power farms as well.

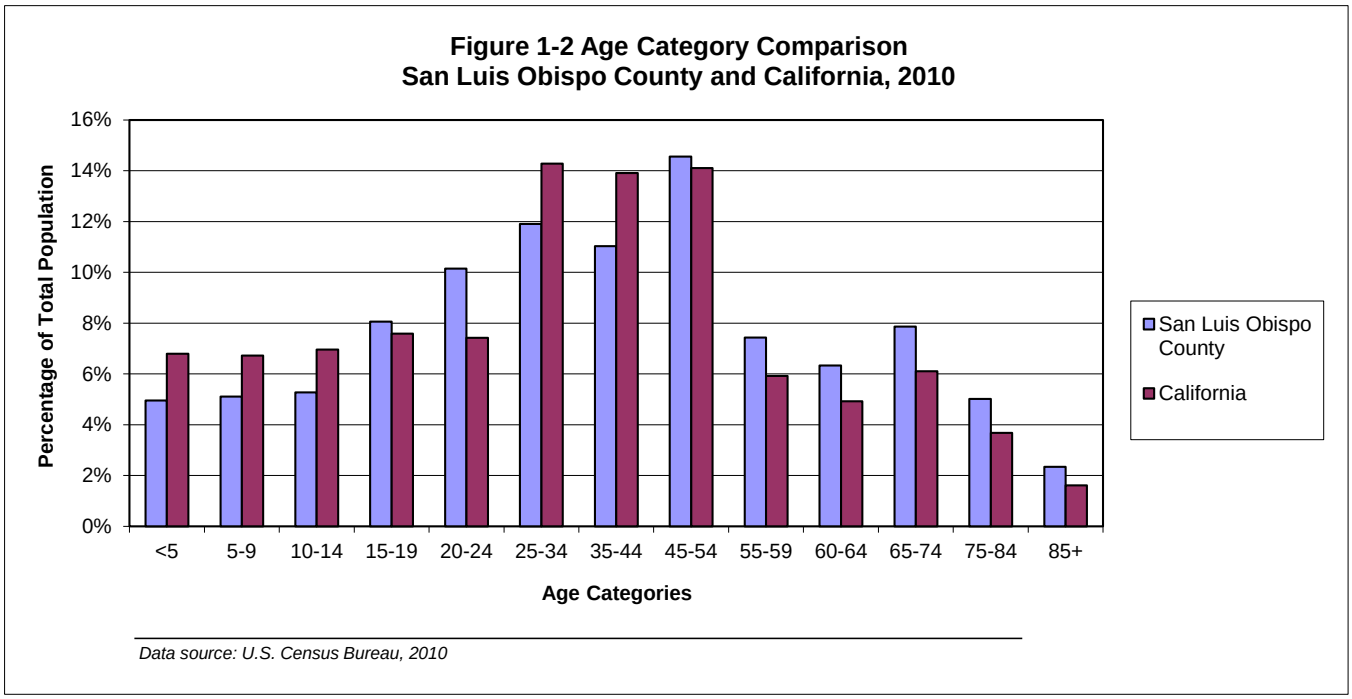
Figure 1-1: San Luis Obispo County Area Map

Map provided by MapQuest.com, Inc.

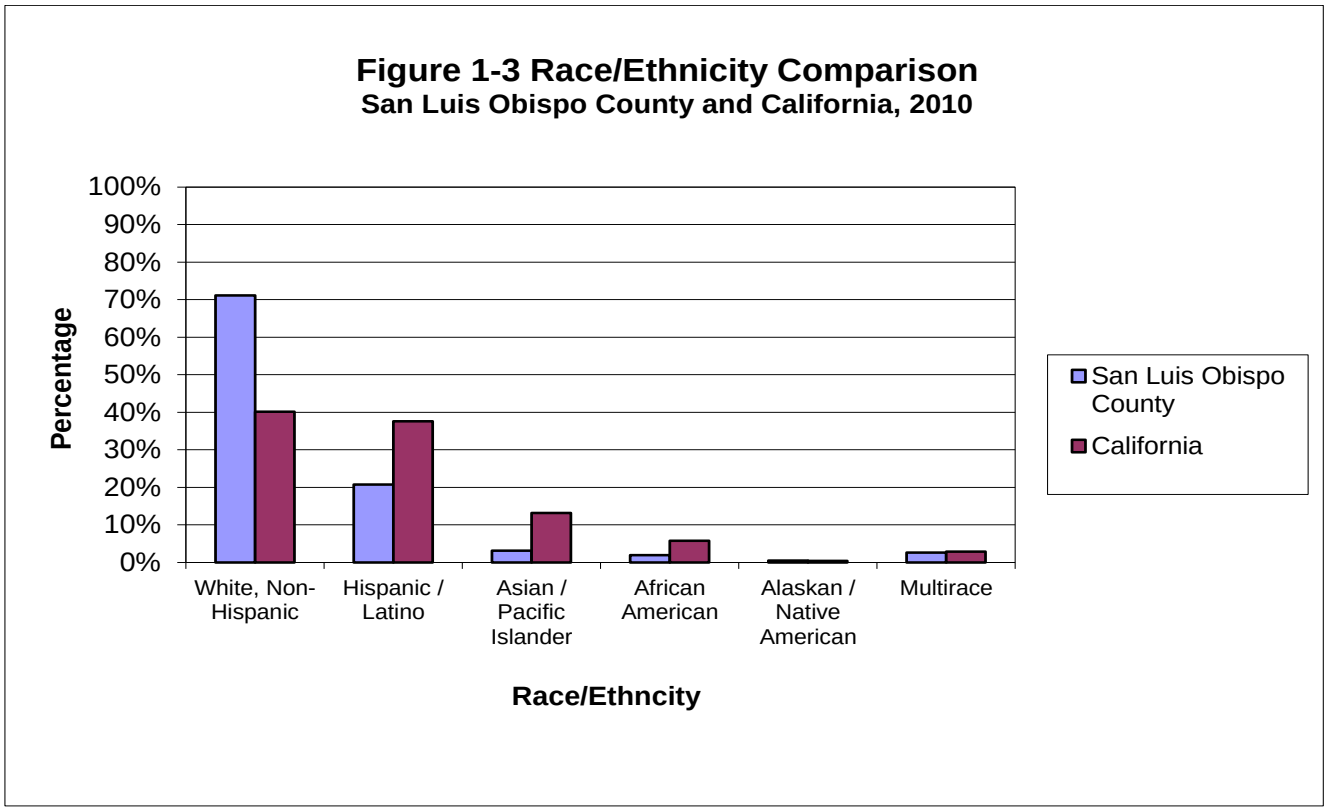
Industry: Key industries in the county include tourism, education, agriculture and government.

Colleges / Universities: San Luis Obispo is the home of California Polytechnic State University, with an enrollment of approximately 18,762 undergraduate and graduate students in Fall 2011, and Cuesta Community College, with three campuses in the county and a total enrollment of 11,194 students in Fall 2011.

Population: Per the 2010 Census, approximately 269,637 persons are living in San Luis Obispo County. Compared to California, San Luis Obispo County has a smaller percentage of its population under the age of 15. In addition, the county has a higher percentage of individuals over the age of 45, which has important implications for disease patterns and demand for health care services. The median age of County residents was 39.4 in 2010, while California had a median age of 35.2. A comparison of the State and County populations, by age categories, is shown in Figure 1-2.



Race/Ethnicity of Population: In a comparison of race/ethnicity make-up, San Luis Obispo County has a higher percentage of non-Hispanic whites compared to the State of California. San Luis Obispo County also has a lower percentage of Hispanic/Latino, African American and Asian individuals compared to the State of California. A comparison of race/ethnicity is shown below in Figure 1-3.



Data source: U.S. Census Bureau, 2010

Population Growth: According to California State Association of Counties, in 2010 San Luis Obispo County had the 23rd largest population in California (out of 58 counties). With a population of 45,119, the City of San Luis Obispo is the largest city in the county; it is also the county seat. A summary of the population growth by city/unincorporated area is provided in Table 1-1. Paso Robles was the fastest growing area from 2000 to 2010.

Table 1-1: Population Growth by City / Unincorporated Area

San Luis Obispo County, 2000 - 2010

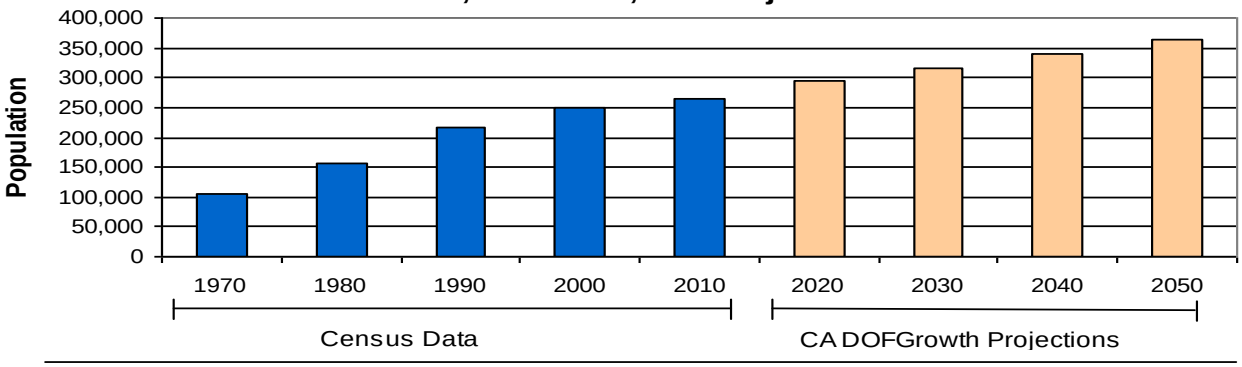
City / Area	2000 Population	2010 Population	Numeric Change	Percent Change
Arroyo Grande city	15,851	17,252	1,401	8.84%
Atascadero city	26,411	28,310	1,899	7.19%
Paso Robles city	24,297	29,793	5,496	22.62%
Grover Beach city	13,067	13,156	89	0.68%
Morro Bay city	10,350	10,234	-116	-1.12%
Pismo Beach city	8,551	7,655	-896	-10.48%
San Luis Obispo city	44,179	45,119	940	2.13%
Other (unincorporated areas)	103,975	118,118	14,143	13.60%
San Luis Obispo County	**246,681**	**269,637**	**23,748**	**9.60%**

Data source: U.S. Census Bureau 2000, 2010

Census Projections: San Luis Obispo County has experienced steady growth since the 1970's. Figure 1-4 shows a summary of the county population and growth estimates for San Luis Obispo County according to the State Census Data Center. In the 1990's, population growth controls were established by limiting the number of new building permits issued by the county; therefore, the actual growth may be less than projected by the State.

Income: According to the US Department of Commerce, Bureau of Economic Analysis, San Luis Obispo County's per capita personal income in 2009 was $40,103 compared to $46,029 for the State. San Luis Obispo County ranked 21st highest among the state's 58 counties for per capita personal income. The median household income for San Luis Obispo County residents has remained lower than the State's, as shown in Table 1-2.

Figure 1-4 Population Growth in San Luis Obispo
Census Results, Estimates, and Projections 1970 - 2050



Data source: State of California, Department of Finance, Population Projections for California and Its Counties 2000-2050, by Age, Gender and Race/Ethnicity, Sacramento, California, July 2007.
U.S.Census Bureau, 2010.

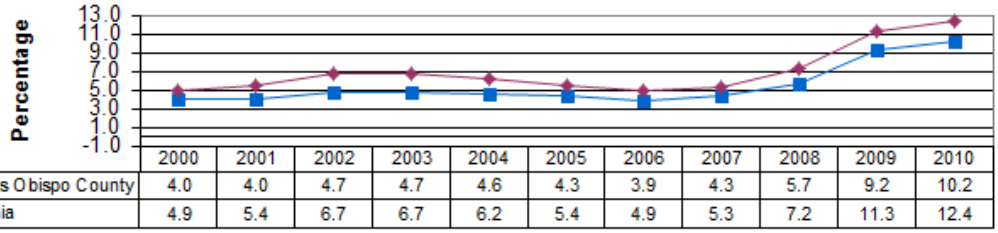
Table 1-2: Median Household Income
San Luis Obispo County and California, 1979 - 2009

Region	1989	2000	2010
San Luis Obispo County	$31,164	$42,428	$53,978
California	$35,798	$47,493	$57,708

Data source,1989: US Census historical reports, Table CPH-L-123, CPH-L-122
Data source, 2000, 2010: U.S. Census Bureau, Summary file Table DP-3

Unemployment: Compared to the State of California, San Luis Obispo County had a lower percentage of unemployment during the past decade. As of December 2011, per the California Employment Development Department, the unemployment rate in San Luis Obispo County was 8.8%, compared to 11.1% statewide in California.

Figure 1-5: Annual Average Rate of Unemployment
San Luis Obispo County and California, 2000 - 2010



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
San Luis Obispo County	4.0	4.0	4.7	4.7	4.6	4.3	3.9	4.3	5.7	9.2	10.2
California	4.9	5.4	6.7	6.7	6.2	5.4	4.9	5.3	7.2	11.3	12.4

Data source: California Employment Development Departments, http://www.labormarketinfo.edd.ca.gov/

Low Income, Uninsured, and Disabled Population

Poverty:

Poverty increases the risk of many conditions, including poor nutrition, low birth weight, cognitive and developmental delays, unaffordable and inaccessible health care, decreased mental well-being, poor academic achievement, unemployment, and inadequate housing. Death rates for people below the poverty level are much higher than those above it. Low socioeconomic status is also associated with higher risks of infectious diseases, accidents and homicides.

Table 2-1 shows the proportion of the population living at or below poverty level in San Luis Obispo County compared to the State of California, per the American Community Survey (ACS), 2010. Table 2-2 shows educational attainment for persons age 25 and over living below the poverty level. Generally, increasing levels of education are associated with decreasing percentages of the population living at or below poverty, as shown in Table 2.2.

Table 2-1: Percentage of Population At or Below Poverty[1]

ACS 2010	San Luis Obispo County	California	United States
Total (individuals)	14.4%	15.8%	15.3%
Under 18 years of age	12.6%	22.0%	21.6%

[1] Number of individuals with incomes less than 100 percent of the Federal poverty line, divided by the total population for whom poverty status is reported.

Data Source: United States Census Bureau, American Community Survey, 2010, Table DP-03

Table 2-2: Poverty Rate for 25 year olds and over by Educational Attainment Level

ACS 2010	San Luis Obispo County	California	United States
Less than high school graduate	22.7%	25.3%	26.7%
High School Graduate (includes equivalency)	13.7%	14.7%	13.5%
Some college, associate's degree	7.4%	9.9%	9.8%
Bachelor's degree or higher	3.3%	4.9%	4.2%

Data Source: United States Census Bureau, American Community Survey, 2010 Table S1501

Medi-Cal Population:

Medi-Cal is California's Medicaid healthcare program. It is jointly administered by the California State Department of Health Care Services and the Centers for Medicare and Medicaid Services. This program pays for needed medical services for individuals, including families with children, persons with disabilities, children in foster care, pregnant women, and low income people with specific diseases such as tuberculosis, breast cancer or HIV/AIDS. Medi-Cal is supported equally by federal and state taxes.

According to the California HealthCare Foundation (CHCF), more than 40% of Medi-Cal enrollees are under age 6, while Medi-Cal is the source of health coverage for between 25 and 33% of children in all age groups in California, pays for forty-six percent(46%) of all births in the state, and two-thirds of all nursing home residents. It is estimated that Medi-Cal provides services for 7.7 million Californians, or 1 in 5 Californians. In San Luis Obispo County, in 2011, Medi-Cal paid for 42% of all births. Per CHCF, although California ranks second among the ten largest states in percent of population enrolled in Medicaid, it spends the least per beneficiary among those states.

Table 2-3 shows the Medi-Cal (Medicaid) eligible population for San Luis Obispo County and California for the Years 1996 – 2007, 2010, 2011. Compared to California, SLO County consistently has a smaller percentage of the population who are eligible (e.g., 11.3% versus 18.9% in 2011). Consistent with the economic downturn of the past few years, enrollment in Medi-Cal has grown; however the rate of growth statewide in contract to the County has been higher, mirroring other economic indicators that hit the State harder than our county.

Table 2-3: County Population, Medi-Cal Eligibles and Medi-Cal Eligibles as a Percent of the Population

Includes regular Fee-For-Service and Managed Care Plans

	San Luis Obispo County			California		
Calendar Year	**Population**	**Medi-Cal Eligibles (N)**	**Eligibles (%)**	**Population**	**Medi-Cal Eligibles (N)**	**Eligibles (%)**
1996	232,400	23,689	10.2%	32,231,000	5,426,417	16.8%
1997	234,100	23,616	10.1%	32,609,000	5,313,560	16.3%
1998	239,000	22,219	9.3%	33,252,000	5,016,520	15.1%
1999	241,600	21,674	9.0%	33,773,000	5,013,153	14.8%
2000	245,200	21,601	8.8%	34,336,380	5,055,258	14.7%
2001	252,100	22,761	9.0%	34,818,430	5,226,284	15.0%
2002	253,600	24,995	9.9%	35,037,360	5,846,217	16.7%
2003	254,500	25,803	10.1%	35,301,000	6,143,458	17.4%
2004	257,500	27,241	10.6%	35,934,000	6,438,701	17.9%
2005	259,924	28,256	10.9%	36,590,814	6,479,986	17.7%
2006	263,747	28,416	10.8%	37,428,879	6,483,815	17.3%
2007	267,154	28,571	10.7%	37,771,431	6,510,009	17.2%
2010	269,637	29,675	11.0%	37,349,363	6,854,153	17.5%
2011	269,637	30,406	11.3%	37,349,363	7,065,890	18.9%

Data Source: State of California, Department of Health Care Services. Medi-Cal/Medicare Dual Eligibility By Age, By County, July 2010.

Women, Infant, and Children Program:

The Women, Infant, and Children (WIC) Supplemental Nutrition Program helps eligible low to medium income pregnant women, new mothers and young children eat well and stay healthy. The average monthly participation in WIC in San Luis Obispo County has increased from 4,227 in 2003 to 4,975 for FY 2010/2011.

Child Health Disability Program:

The Child Health Disability Prevention (CHDP) Program provides comprehensive health examinations to low-income infants, children and adolescents to help children stay healthy and find health problems early. CHDP providers are pediatricians/practitioners in the county who perform the comprehensive physical examinations according to a periodicity schedule established by the State CHDP program. Referrals from CHDP providers to specialists are made as appropriate and are documented on a CHDP form. The CHDP data for FY 2010/11 shows 9,740 San Luis Obispo County children received physical examinations. The primary medical reasons for referrals were: vision (25%), dental/oral (23%), nutritional/growth (11%), behavioral/developmental (13%), hereditary disorders-perinatal substance abuse (8%), and eye/ear/nose/throat (5%). All chronic medical conditions (such as asthma or cardiac conditions) where a child is already receiving treatment were not included in the data.

CalWORKs:

California Work Opportunity and Responsibility to Kids (CalWORKs) is a welfare program that gives cash aid and services to eligible needy California families. County welfare departments operate the program locally. If a family has little or no cash and needs housing, food, utilities, clothing or medical care, they may be eligible to receive immediate short-term help. Families that apply and qualify for ongoing assistance receive money each month to help pay for housing, food and other necessary expenses. As of July 2008:

- 4,329 (1.6%) of the 269,637 residents (1,864 families) of San Luis Obispo County received CalWORKs, compared to 2.8% for the California population.

SSI/SSP:

The Supplemental Security Income/State Supplementary Payment (SSI/SSP) Program provides cash assistance to aged, blind or disabled persons who meet the program's income and resource requirements. California supplements the federal SSI payment with an SSP payment and food stamp cash equivalents. For the month of November 2011, the number of recipients of SSI/SSP in San Luis Obispo County was 208 out of 109,262 statewide. There were 25 California counties that had a higher number of SSI/SSP recipients. Data source: http://www.cdss.ca.gov/research/PG343.htm.

Uninsured Population:

Recently released data from the California Health Interview Survey (CHIS) 2009 and other sources points to an increase in the number of un-insured among most age groups. Further, it is anticipated that the recent economic recession and California's fiscal crisis has and will continue to impact insurance status among adults and children under the age of 18.

According to the 2009 California Health Interview Survey (CHIS) and the National Center for Policy Analysis (NCPA):

- 14.7% of Californians under age 65 (all income levels) are uninsured
- Children in California are less likely to be uninsured than in the rest of the nation—4.9% (CHIS) vs. 15.3% nationwide (NCPA).

See Table 2-3 for the estimated percentage of the San Luis Obispo County and California populations who were uninsured per the 2009 California Health Interview Survey (CHIS). The percentage of uninsured children rose dramatically according to CHIS 2009, at 13.4%, up from 2.9% in CHIS 2007. The approximate number of uninsured individuals in San Luis Obispo County is estimated by CHIS to be:

- 7,000 children (ages 0-17) up from 2000 in CHIS 2007.
- 24,000 non-elderly adults (ages 18-64) down from 25,000 in CHIS 2007

Table 2-3: Uninsured Population Estimates

	San Luis Obispo County	California
Children (ages 0-17)		
➢ % Uninsured	13.4% CI (6.5-20.2)	4.9% CI (4.2-5.6)
Non-elderly Adults (ages 18-64)		
➢ % Uninsured	15.1% CI (7.3-23.0)	20.9% CI (19.6-22.1)

The 95% range (confidence interval) is provided in parenthesis.
Source: 2009 California Health Interview Survey, http://www.chis.ucla.edu/

Disabled Population:

Table 2-4 shows the proportion of the population living with a disability, per the U.S. Census American Community Survey, 2009. Disabled populations are broken down into categories based on age ranges. People 5 years old and over are considered to have a disability if they have one or more of the following: (a) blindness, deafness, or a severe vision or hearing impairment; (b) a substantial limitation in their ability to perform basic physical activities, such as: walking, climbing stairs, reaching, lifting, or carrying; (c) difficulty learning, remembering, or concentrating; or (d) difficulty dressing, bathing, or getting around inside the home. In addition to the above criteria, people 16 years old and over are considered to have a disability if they have difficulty going outside the home alone to shop or visit a doctor's office. People ages 16– 64 years are considered to have a disability if they have difficulty working at a job or business.

Table 2-4: Proportion of Population Living with a Disability

San Luis Obispo County and California, 2009

	San Luis Obispo County	California
Ages 5 to 17 years	2.2%	3.8%
Ages 18 to 64 years	8.1%	5.2%
Ages 65 and older	34.5%	37.6%

Data source: U.S. Census, American Community Survey, 2009. Estimates are for civilian, noninstitutionalized population.

Note: The Census Bureau introduced a new set of disability questions in the 2008 ACS. Comparisons of disability data from 2008 or later with data from prior years are not recommended.

Data Sources:

- California Health Interview Survey, AskCHIS, available at: http://www.chis.ucla.edu/default.asp
- National Center for Policy Analysis, Health Issues (2008) available at: http://www.ncpa.org/sub/dpd/index.php?Article_ID=16962
- California Healthcare Foundation "Medical Facts and Figures – a look at California's Medicaid Program" available at: http://www.chcf.org/documents/policy/MediCalFactsAndFigures2007.pdf

Education

Education, Health and Poverty:

Education is one of several important factors often interrelated with health. According to the National Center for Education, the better educated a person is, the more likely that a person is to report being in very good or excellent health, regardless of income. As shown in Table 2-2, educational attainment has a significant impact on poverty status.

According to the Department of Health and Human Services:

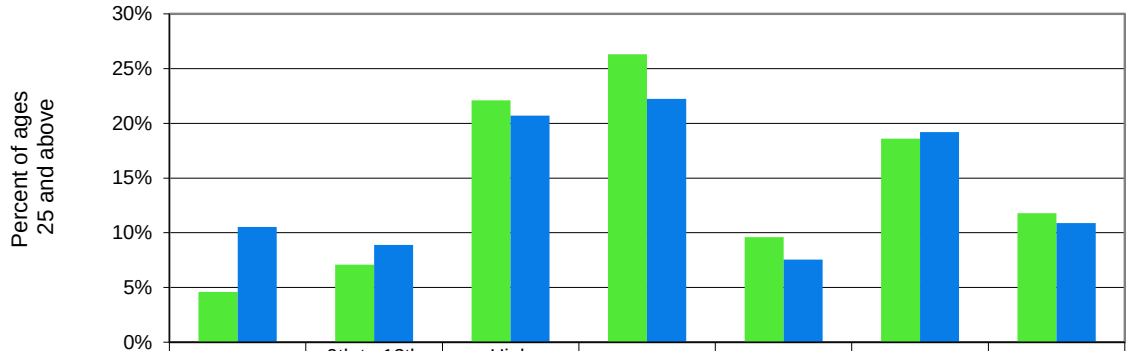
- Dropping out of school is associated with delayed employment opportunities, poverty, and poor health.
- During adolescence, dropping out of school is associated with multiple social and health problems, including substance abuse, delinquency, intentional and unintentional injury, and unintended pregnancy.

Educational Attainment:

San Luis Obispo County has a slightly higher percentage of residents with some college or more versus statewide (40% vs. 37.7%). SLO County also has a slightly higher percentage of High School Graduates (including equivalency degrees) than the state as a whole. Due to the greater percentages of better educational attainment, compared to the State, San Luis Obispo County has a lower percentage of residents with an education level less than ninth grade, as shown in Figure 3-1.

Figure 3-1: Educational Attainment - 25 year olds and above

San Luis Obispo County and State of California, 2010

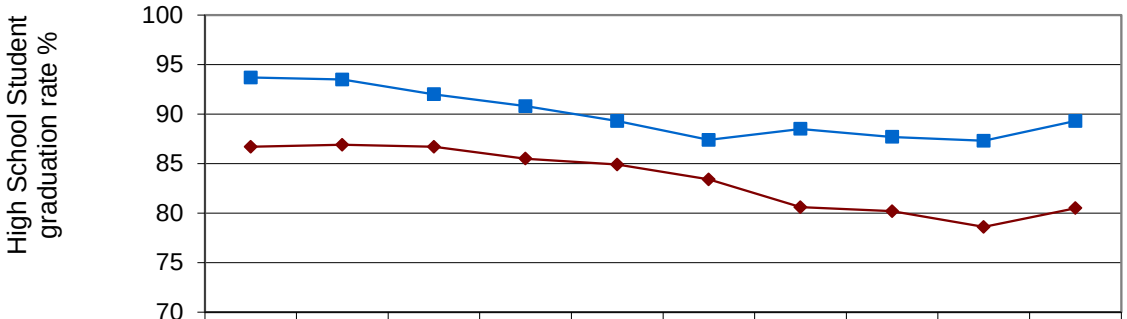


	Less than 9th Grade	9th to 12th Grade-no diploma	High School graduate	Some College	Associate Degree	Bachelors Degree	Advanced Degree
San Luis Obispo County	4.6%	7.1%	22.1%	26.3%	9.6%	18.6%	11.8%
State of California	10.5%	8.9%	20.7%	22.2%	7.6%	19.2%	10.9%

Data source: U.S. Census Bureau, American Community Survey, 2010 (http://www.census.gov).

Graduation Rate: As shown in Figure 3-2, San Luis Obispo County has consistently had a higher percentage of high school students who graduate compared to the State of California. Neither the County nor the State are meeting the Healthy People 2020 objective of 97.9 percent of 18-24 years old completing a high school education. Both the State and San Luis Obispo County improved their graduation rates in 09-10.

Figure 3-2: High School Graduation Rates
California and San Luis Obispo County, 2000-2001 to 2009-2010



	00-01	01-02	02-03	03-04	04-05	05-06	06-07	07-08	08-09	09-10
San Luis Obispo County	93.7	93.5	92.0	90.8	89.3	87.4	88.5	87.7	87.3	89.3
California	86.7	86.9	86.7	85.5	84.9	83.4	80.6	80.2	78.6	80.5

Data source: California Department of Education, Educational Demographics Unit, High School Graduation Rates based on NCES Definition, http://dq.cde.ca.gov/dataquest/ (DataQuest)

High School Dropout Rates: As shown in Table 3-1, San Luis Obispo County had a lower percentage (1-year rate) of high school students who dropped out in 2009-2010 compared to California (2.5% and 4.6%, respectively), this held true for nearly every race/ethnicity group.

Table 3-1: High School Dropout Rates (Public Schools), One-Year
San Luis Obispo County and California, 2009-2010

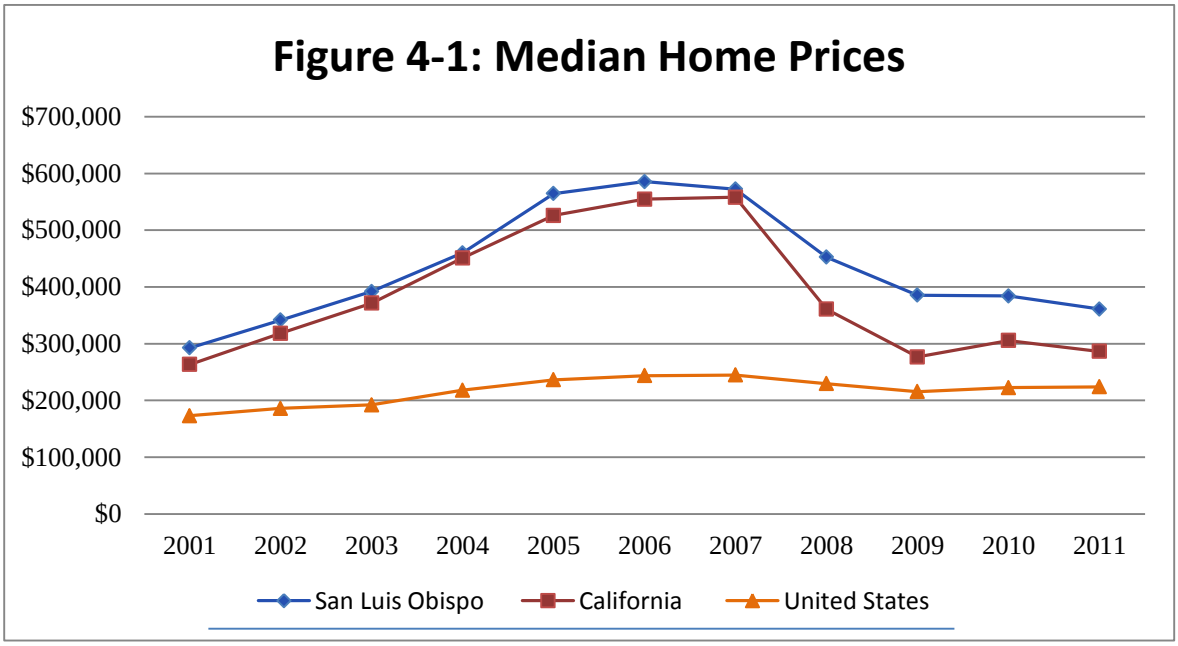
Race/Ethnicity	California		San Luis Obispo County	
	Number	Percent	Number	Percent
White, not Hispanic	11,665	2.0%	130	1.8%
Hispanic or Latino, of any race	40,470	4.2%	135	3.8%
African American, not Hispanic	9,319	6.2%	6	3.0%
Asian, not Hispanic	2,285	1.3%	0	0.0%
Pacific Islander, not Hispanic	438	3.4%	1	4.5%
Filipino, not Hispanic	747	1.4%	2	1.6%
American Indian, not Hispanic	780	4.9%	3	2.5%
Multiple or no response	1,890	6.8%	4	5.3%
Total (with adjusted percentage*)	**91,074**	**4.6%**	**301**	**2.5%**

Data source: California Department of Education, Educational Demographics Unit. [Per the California Department of Education, the 1-year dropout rate is the percent of dropouts during a single year, calculated from actual data submitted. It is also called the "annual" or "event" rate and it is the dropout rate used by the National Center for Education Statitics to compare states and school districts.]

**Adjusted percentage may not reflect total numbers, instead reflects all students, including those found later to have re-enrolled at other schools in California.*

Housing

Median Home Price: Compared to the United States, San Luis Obispo County and the State of California have a higher cost of housing (for a median-priced home), as shown in Figure 4-1. The housing market collapse after the sub-prime mortgage debacle has recently been depressing housing prices across the nation, but the effect has been more dramatic in California and San Luis Obispo County. Still, as seen in Table 4-2 however, San Luis Obispo is one of the least affordable housing markets in the nation.



Affordability: The percentage of households in California able to afford a median-priced home rose dramatically following the collapse of the housing market beginning in 2007, according to a report by the California Association of Realtors. The percentage of households in San Luis Obispo County able to afford a median-priced home went from 11% in 2005 to 40% in the third quarter of 2011. These numbers remain lower compared to the United States, in which 67 percent of households are able to afford a median-priced home in 2011. These data are summarized in Table 4-1.

Table 4-1: Percentage of Households Able to Afford an Existing Median Priced Single Family Home

San Luis Obispo County, California, and the United States, 2005 - 2011

Location	December 2005	December 2007	December 2008	December 2009	Q3 2011
San Luis Obispo County	11	28	27	32	40
California	17	33	43	53	52
United States	49	65	58	64	67

Data source: California Association of REALTORS®

Among 225 communities in the United States, San Luis Obispo County ranked as the 8th least affordable area for housing in the third quarter of 2011, as shown in Table 4-2. This is down from the 3rd least affordable in 2009.

Table 4-2: Twelve Least Affordable Housing Markets

United States, 2011

Market	Percent of homes affordable for median income family	Median family income ($1000s)	Median sales price ($1000s)	Rank
New York-White Plains-Wayne, NY-NJ	23.3	81.6	450	1
San Francisco-San Mateo-Redwood City, CA	32.9	101.6	585	2
Honolulu, HI	40.0	81.6	425	3
Ocean City, NJ	41.7	70.1	353	4
Santa Ana-Anaheim-Irvine, CA	43.0	84.2	405	5
Los Angeles-Long Beach-Glendale, CA	45.1	64.0	300	6
Santa Cruz-Watsonville, CA	47	85.8	395	7
San Luis Obispo-Paso Robles, CA	49.3	74.4	329	8
San Jose-Sunnyvale-Santa Clara, CA	51.5	103.6	443	9
Bridgeport-Stamford-Norwalk, CT	51.9	105.3	390	10
Newark-Union, NJ-PA	52.4	90.6	330	11
McAllen-Edinburg-Mission, TX	53.4	33.7	107	12

Data source: National Association of Home Builders, Housing Opportunity Index, 2011 3rd Quarter report

Other Housing Concerns:

The ACTION for Healthy Communities San Luis Obispo County Comprehensive Report (2010) also addresses concerns about a variety of other topics related to housing, including:

- Concerns about homelessness
- Homeless shelters
- Fair market rents
- Concerns about housing costs
- Housing expenses
- Housing affordability
- Housing prices

These topics will not be repeated in this report; however, we encourage you to review the ACTION for Healthy Communities report for more details about housing and homelessness. For more information about ACTION for Healthy Communities, contact:

San Luis Obispo County Community Foundation
P.O. Box 1580
San Luis Obispo, CA 93406
Telephone: (805) 543-2323
Facsimile: (805) 543-2346

** This report is also available at the United Way of San Luis Obispo County's website, under Community Partners, at http://www.unitedwayslo.org.*

Health Care

Basic Health Care:

The ACTION for Healthy Communities San Luis Obispo County Comprehensive Report* (2010) addressed concerns about a variety of topics related to health care, including:

- Basic needs, including health care, not met
- Source of primary health care
- Last routine check-up
- Inability to receive medical care (unaffordable)
- Dental care
- Health insurance

These topics will not be repeated in this report; however, we encourage you to review the ACTION for Healthy Communities 2010 report for more details. To obtain more information, contact:

San Luis Obispo County Community Foundation
P.O. Box 1580
San Luis Obispo, CA 93406
Telephone: (805) 543-2323
Facsimile: (805) 543-2346

** This report is available at the United Way of San Luis Obispo County's website, under Community Partners, at http://www.unitedwayslo.org*

Health Care Professionals:

- Registered Nurses (RNs): RNs are the largest healthcare occupation in the US, with approximately 2.6 million jobs held by RNs in 2010. According to the Kaiser Family Foundation, California had 644 RNs per 100,000 population in 2010, fewer than the national average of 860. Since 2000, the number of new licenses issued each year has approximately doubled, to almost 24,000 in 2010, up from approximately 9,000 in 2000. The Health Resources and Services Administration (HRSA) estimates that the RN shortage is easing slightly in the US.

- Physicians: According to HRSA, California had 1 physician or surgeon for every 176 persons, slightly above the national rate of 1 per 192 persons. However, this number varies widely by geography. (These numbers indicate non-federal physicians, including allopathic physicians, or MDs, and osteopathic physicians, or DOs.

- Dentists: According to HRSA, California had 1 for each 33 persons in 2010, less than the national average of 1 per every 28 persons.

- Pharmacists: According to HRSA, California had 1 pharmacists per every 33 persons in 2010, as compared to 1 per every 28 nationally. San Luis Obispo County had 70.2 pharmacists per 100,000 persons in May 2009. In another study, California is ranked as one of the five states with the greatest unmet need for pharmacists in the nation. However, between 1980 and 2010, the number of new licenses issued to pharmacists in California has grown by ~80%.

- Mental Health Professionals: According to the Center for Health Professionals at UCSF, California had 6.8 licensed psychiatrists per 100,000 in 2007. California also had 34.5 psychologists per 100,000, and 38.4 Mental Health and Substance Abuse Social Workers per 100,000. In 2008, the Central Coast had 7.1 Mental Health professionals of all types per 100,000 (LCSW, MFT, Psychologist, Psych Tech, PMH Nurse, and Psychiatrists). Los Angeles and the Bay Area had the most at 24.7 and 29.8, respectively, while the Central Valley had the least at 1.9 per 100,000.

Nursing Shortage: California has approximately 10,210 RN job openings annually according to the State's Employment Development Department. In California, steps to address the nursing shortage are bearing fruit, with 23 additional RN programs opening between 2005-2008. In 2008, 9,580 RNs graduated from accredited programs, an increase of 54% over the previous four years. Over the short term, nursing vacancies are dropping due to RNs re-entering the workforce during the recent economic downturn. However, the average age of an RN in California is over 47, so as this workforce retires, the long term outlook is not as good.

Hospital Bed Capacity: Table 5-1 provides a summary of 2007 through 2010 results for California and San Luis Obispo County hospital bed capacity by three different categories: licensed beds, available beds, and staffed beds. The 2010 available bed occupancy rate was lower in San Luis Obispo County compared to California. Brief definitions of key terms related to hospital bed capacity follows:

- Licensed beds: The number of beds licensed by the Licensing and Certification Division of the Department of Health Services, including those beds in suspense, during the reporting period. [Note: Most hospitals do not operate all of the beds for which they are licensed. In fact, for some hospitals, it would be physically impossible to do so due to lack of space.]

- Available beds: The number of beds (excluding bassinets) that are licensed, physically existing and actually available for overnight use, regardless of staffing levels. Beds in suspense and beds in nursing units converted to uses other than inpatient overnight accommodations (which cannot be placed back into service within 24 hours) are not included.

Table 5-1: Hospital Bed Capacity

California and San Luis Obispo County, 2007 - 2010

Region/Hospital	Number of Beds (N)		Occupancy Rate (%)	
	Licensed[1]	Available[2]	Licensed Beds	Available Beds
CALIFORNIA				
2007	79,324	72,215	60.60%	66.60%
2008	78,449	71,883	61.00%	66.60%
2009				
20010	88,374	Unk	59.18%	Unk
SLO COUNTY TOTAL*				
2007	461	461	49.30%	49.30%
2008	461	461	49.90%	49.90%
2009	471	471		
2010	479	479	48.70%	48.70%
Arroyo Grande Community Hospital (Arroyo Grande)				
2007	65	65	57.70%	57.70%
2008	65	65	57.60%	57.60%
2009	65	65	51.6%	51.6%
2010	65	65	50.3%	50.3%
French Hospital Medical Center				
2007	112	112	39.30%	39.30%
2008	112	112	41.70%	41.70%
2009	112	112	41.88%	41.88%
2010	112	112	41.25%	41.25%
Sierra Vista Regional Medical Center (San Luis Obispo)				
2007	200	200	43.00%	43.00%
2008	200	200	40.60%	40.60%
2009	164	164	50.41%	50.41%
2010	164	164	47.29%	47.29%
Twin Cities Community Hospital (Templeton)				
2007	84	84	70.90%	70.90%
2008	114	84	77.00%	77.00%
2009	114	114	65.58%	65.58%
2010	122	122	57.53%	57.53%
SLO County Mental Health				
2007	16	14	53.10%	59.60%
2008	16	16	44.10%	44.10%
2009	16	16	40.05%	40.05%
2010	16	16	43.96%	43.96%

- Staffed beds: The averaged number of beds that are licensed, available and for which there are staff on hand to attend to the patient who occupies the bed.

- Occupancy rate: A measure of the usage of the beds during the reporting period that is derived by dividing the patient days in the reporting period by the bed days in the reporting period. Bed days can be calculated using licensed beds, available beds, or staffed beds.

Table 5-2: Emergency Medical Services Visits

California and San Luis Obispo County, 2010

Region/Hospital	Minor[1]	Low /Moderate[2]	Severe[3]	Resulting in Hospital Admission	**Total**
CALIFORNIA					
Number	887,210	6,250,347	4,572,349	**1,840,596**	**11,818,389**
Percent of Total	7.51%	52.89%	38.69%	15.57%	99.08%
SLO COUNTY TOTAL[4]					
Number	5,868	43,555	38,762	11,450	**88,185**
Percent of Total	6.65%	49.39%	43.96%	12.98%	100%
Sierra Vista Regional Medical Center					
Number	2,269	7,549	12,604	2,685	**25,107**
Percent of Total	11.56%	38.47%	49.97%	13.68%	100%
Twin Cities Community Hospital					
Number	2,608	14,950	14,025	4,205	**31,583**
Percent of Total	8.26%	47.34%	44.41%	13.31%	100%
French Hospital Medical Center					
Number	410	8,286	6,701	2,374	**15,397**
Percent of Total	2.66%	53.82%	43.52%	15.42%	100%
Arroyo Grande Community Hospital					
Number	581	12,770	8,230	2,186	**21,581**
Percent of Total	2.69%	59.17%	38.14%	10.13%	100%

Source: Office of Statewide Health Planning and Development website (www.oshpd.state.ca.us). Data obtained from the Hospital Annual Utilization Data Profile, 2010, located in the Healthcare Information Resources, Utilization section of the Hospital Data.

[1] Minor EMS Visits = a visit by a patient with a non-emergency injury, illness, or condition; sometimes chronic; that can be treated in a non-emergency setting and not necessarily on the same day they are seen in the EMS Department. The CPT Code is 99281 (single problem with straightforward medical decision making). Includes admissions.

[2] Low/Moderate EMS Visits =a visit by a patient with an acute injury or illness where loss of life or limb is not an immediate threat to his/her well being, or by a patient who needs a timely evaluation (fracture or laceration). The CPT Code for this level of service is 99282 (low complexity) or 99283 (low to moderate complexity). Includes admissions.

[3] Severe EMS Visits = a visit by a patient with an acute injury or illness that could result in permanent damage, injury or death (head injury, vehicular accident, a shooting). The CPT Code for this level of service is 99284 (no immediate significant threat to life) or 99285 (immediate threat to life). Includes admissions.

[4]Total is for hospitals with Emergency Rooms only.

Emergency Medical Service Visits:

Table 5-2 shows the OSHPD number of Emergency Medical Service (EMS) visits for California and San Luis Obispo County hospitals in 2010, including the number of EMS visits that resulted in hospital admissions. The definitions of the categorizations of Minor, Low/Moderate, and Severe are provided at the bottom of the table.

Data Sources:

- Forecasts for the Registered Nurse Workforce in California, 2007, *Spetz,J.* Center for California Health Workforce Studies, UCSF. Available at http://www.rn.ca.gov/pdfs/forms/forecasts2007.pdf
- American Association of Colleges of Nursing: http://www.aacn.nche.edu/Media/FactSheets/NursingShortage.htm
- US Department of Health and Human Services, Health Resources Services Agency –Health Workforce Statistics

  http://hws.hrsa.gov/
- Office of Statewide Planning and Development

  http://www.oshpd.ca.gov/hid/Products/Hospitals/Utilization/Hospital_Utilization.html

Prenatal Care

Definition:

Prenatal care is defined as pregnancy-related health care services provided to a woman between conception and delivery. The two measures assessed for prenatal care include:

- Percentage of live born infants whose mothers received prenatal care in the first trimester of pregnancy.
- Percentage of live born infants whose mothers received adequate or "adequate plus" prenatal care as defined by the APNCU Index.

The Adequacy of Prenatal Care Utilization (APNCU) Index measures two dimensions of care: the adequacy of initiation of care and the adequacy of the use of prenatal services once care has begun (by comparing actual use to the recommended number of visits based on the month of initiation of care and the length of pregnancy). These dimensions are combined to classify each woman's prenatal care history as inadequate, intermediate, adequate, or adequate-plus.

Importance:

The use of timely, high-quality prenatal care can help to prevent poor birth outcomes, especially by identifying women who are at high risk and by providing counseling to mitigate risks such as the use of alcohol, tobacco, and other drugs.

- The American College of Obstetricians and Gynecologists recommends at least 13 prenatal visits in a normal 9-month pregnancy: one each month for the first 28 weeks of pregnancy, one every 2 weeks until 36 weeks, and then weekly until birth.
- The California Department of Public Health reports that during 2007-2009, the average overall percent of pregnant women in California beginning prenatal care in the first trimester was 82.7%. This indicator has been decreasing in recent years (from a high of 87% in 2003-2005) for all population groups, but racial and ethnic minorities remain less likely than whites to enter care early and to receive adequate care.

National Objectives:

Two national objectives (Healthy People 2020) related to prenatal care are:

- Increase to at least 77.9 percent the proportion of all pregnant women who begin care in the first trimester of pregnancy.
- Increase to at least 77.6 percent the proportion of all live-born infants whose mothers receive prenatal care that is adequate or more than adequate according to the APNCU Index.

Key Findings:

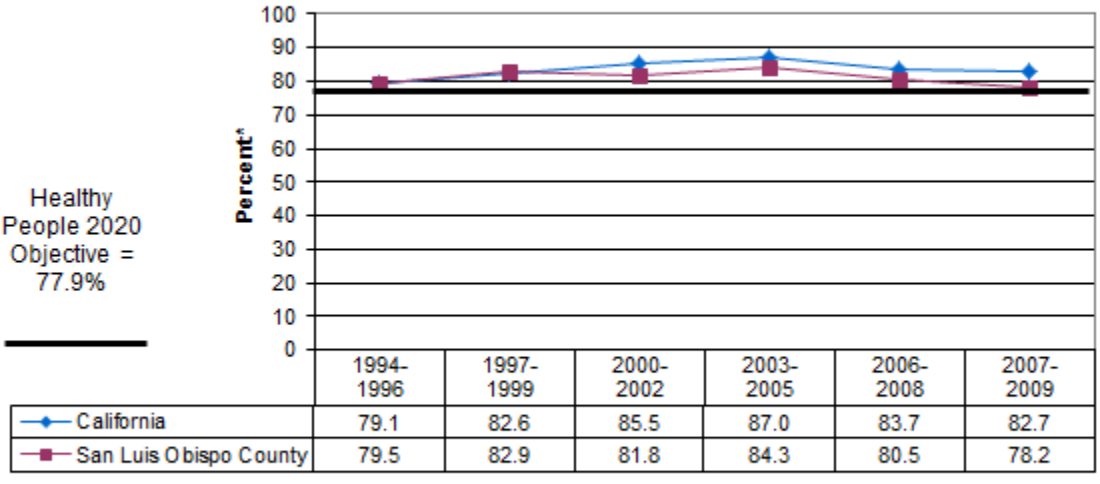
Timely Prenatal Care: As shown in Figure 6-1, from 2000-2009, the percentage of all live-born infants whose mothers began prenatal care during their first trimester is lower in San Luis Obispo County than statewide, however San Luis Obispo County is currently meeting the Healthy People 2020 goal.

- During 2006-2008, San Luis Obispo ranked 28th out of 58 counties for mothers who obtained prenatal care in their first trimester (i.e., 27 counties in California had a higher percentage of live-born infants whose mothers obtained prenatal care in their first trimester). This ranking is down from 21st for 2005-2007.

Adequate Prenatal Care: As shown in Figure 6-2, from 1991-2009, the percentage of all live-born infants whose mothers received prenatal care that was adequate or more than adequate:

- Has improved and achieved the new national objective of 77.6%.
- Has been higher for San Luis Obispo County residents compared to the State of California.
- During 2007-2009, San Luis Obispo ranked 6th out of 58 counties (i.e., 5 counties in California had a higher percentage of live-born infants whose mothers received adequate or better than adequate prenatal care). This is up from 8th in 2005-2007.

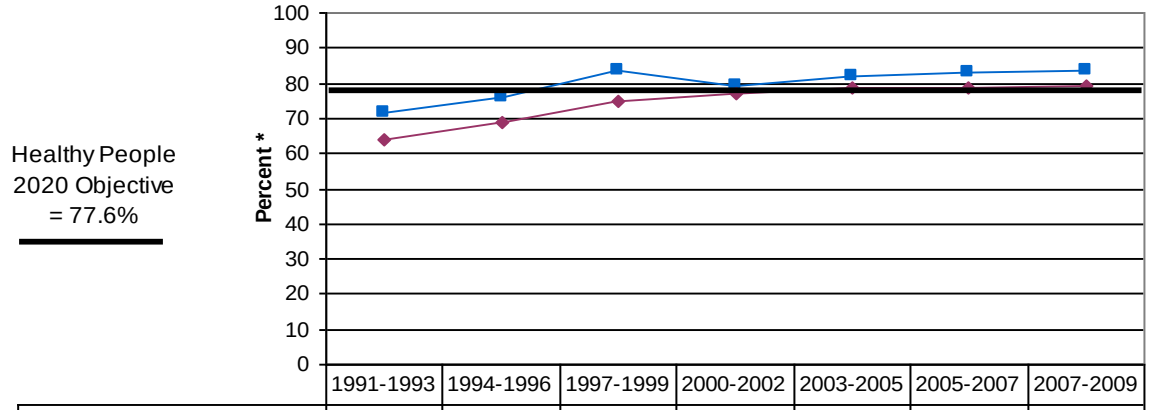
Figure 6-1: Timely Prenatal Care: First Trimester
California and San Luis Obispo County, 1994 - 2009



	1994-1996	1997-1999	2000-2002	2003-2005	2006-2008	2007-2009
California	79.1	82.6	85.5	87.0	83.7	82.7
San Luis Obispo County	79.5	82.9	81.8	84.3	80.5	78.2

** Percent refers to percent of liveborn infants whose moms began prenatal care in their 1st trimester. Data source: County Health Status Profiles, California Department of Public Health, Center for Health Statistics.*

Figure 6-2: Adequacy of Prenatal Care
California and San Luis Obispo County, 1991-2009



	1991-1993	1994-1996	1997-1999	2000-2002	2003-2005	2005-2007	2007-2009
San Luis Obispo County	71.7	76.0	83.8	79.4	81.7	82.9	83.4
California	63.9	68.6	75.0	76.9	78.5	78.5	79.0

** Percent refers to percent of liveborn infants whose moms received adequate or better prenatal care. Data source: County Health Status Profiles, California Department of Public Health , Center for Health Statistics.*

Primary Prevention Activities:

Primary prevention activities that encourage early entrance into prenatal care in order to improve the health of mothers and their infants include:

- Providing education regarding the importance of beginning prenatal care in the first trimester of pregnancy, and receiving at least 13 prenatal visits during a full-term pregnancy.
- Ensuring that all pregnant women have access to prenatal care that they can afford.
- Providing prenatal services that are culturally acceptable for hard-to-reach populations.

Cost Analysis:

Investing in prenatal care is cost effective, as every $1 spent on prenatal care can save on hospital bills, birth complications, and low birth-weight babies. Estimates on savings range from $3.33[1] saved for each dollar invested to $7[2]

Data Sources:

Data sources for this report include:

- California Department of Public Health, Center for Health Statistics, County Health Status Profiles, available at: http://www.dhs.ca.gov/hisp/chs/OHIR/Publication/publicationindex.htm
- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/

[1] Lu MC et al., Elimination of public funding of prenatal care for undocumented immigrants in California: a cost/benefit analysis, *American Journal of Obstetrics and Gynecology,* 2000, 182(1, pt. 1):233-239.

[2] Morales WJ, Vaughn BJ, Diebel ND. The cost of no prenatal care. J Florida Med Assn 1985; 72: 852–55

Births

Definition:

Birth rate: the number of live births per 1,000 total population.
General Fertility rate: the number of live births per 1,000 women of child bearing ages (15-44).
Distribution of births by race/ethnicity: the proportion of total live births for selected race/ethnic groups.

Importance:

According to the Department of Health and Human Services:

- Half of all pregnancies in the United States are unintended.
- In the case of an unwanted pregnancy, the mother is less likely to seek prenatal care in the first trimester and more likely not to obtain prenatal care at all. She is less likely to breastfeed and more likely to expose the fetus to harmful substances such as tobacco or alcohol.
- The child of an unwanted pregnancy is at greater risk of being low birthweight, dying in its first year, being abused, and not receiving sufficient resources for healthy development.
- A disproportionate share of the women bearing children whose conception was unintended are unmarried or at either end of the reproductive age span, factors that in themselves carry increased medical and social burdens for children and their parents.

National Objective:

There is no national objective specific to general births; however, the Healthy People 2020 goal for Family Planning is "every pregnancy in the United States should be intended."

Key Findings:

Previously, statistics on the Birth Rate had been reported, however, due to the population characteristics of San Luis Obispo County (i.e., a larger proportion of elder residents of non-childbearing age), only the General Fertility Rate will be shown.

General Fertility Rate: As shown in Figure 7-1, the rate of live births per 1,000 women of childbearing ages has generally been declining for California since 2000. However, San Luis Obispo County's rate has increased slightly at first, then decreased again over the same period. The county rate has remained lower than the state rate each year and has begun to decrease since the highest rate of 59.4 per 1,000 in 2007.

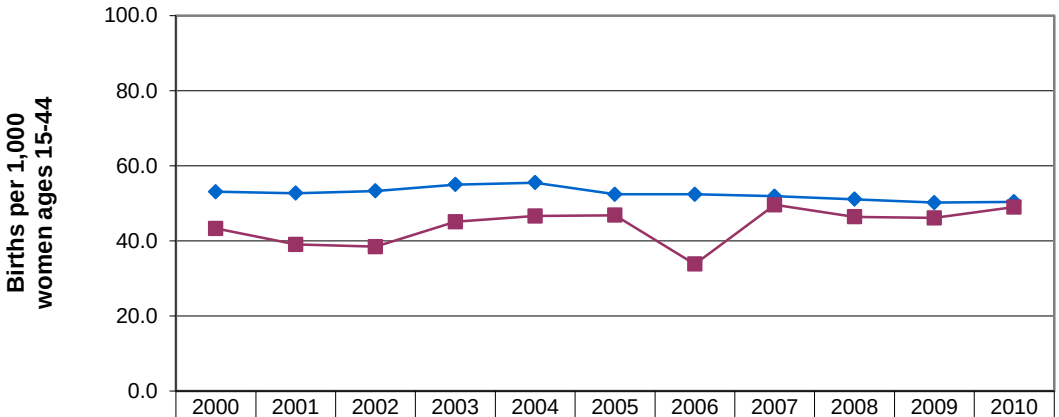
Distribution of births by race/ethnicity: As shown in Figures 7-2 and 7-3, between 2000 and 2010, the general fertility rate among San Luis Obispo County residents has been narrowing compared to that of other Californians for both non-Hispanic Whites and Hispanics. The GFR for Hispanics in SLO topped the GFR for Hispanics statewide for the first time in 2010. The fertility rate for Hispanics in San Luis Obispo County is higher than the fertility rate for, non-Hispanic Whites.

Figure 7-1: General Fertility Rate for Residents
California and San Luis Obispo County, 2000-2010

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
California	70	68.7	68.4	69.5	69.3	70.2	71.3	71	68.7	65.2	64.5
San Luis Obispo County	48.5	48.5	47.3	55.8	54.0	53.4	56.2	59.4	56.4	53.9	54.0

Data source: California Department of Public Health, Center for Health Statistics, Vital Statistics Section.

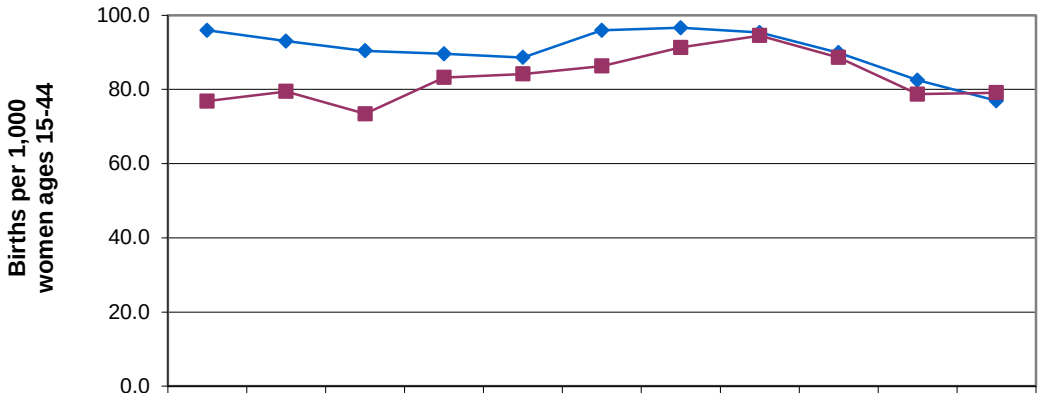
Figure 7-2: General Fertility Rate for non-Hispanic Whites
California and San Luis Obispo County, 2000-2010



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
California	53.1	52.7	53.3	55.0	55.5	52.4	52.4	51.9	51.1	50.2	50.4
San Luis Obispo County	43.3	39.0	38.4	45.1	46.6	46.8	33.8	49.6	46.4	46.1	49.0

Data source: California Department of Public Health, Center for Health Statistics, Vital Statistics Section.

Figure 7-3: General Fertility Rates for Hispanics
California and San Luis Obispo County, 2000-2010

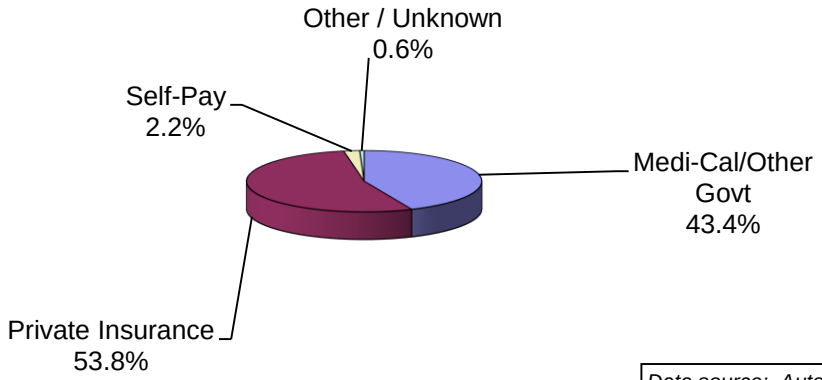


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
California	95.9	93.0	90.4	89.6	88.6	95.9	96.6	95.3	89.9	82.5	76.9
San Luis Obispo County	76.8	79.4	73.4	83.2	84.2	86.3	91.3	94.5	88.6	78.7	79.1

Data source: California Department of Public Health , Center for Health Statistics, Vital Statistics Section.

Payment for Delivery: Over 40% of births to residents of San Luis Obispo County are covered by Medi-Cal (California's publicly funded Medicaid program). As shown in Figure 7-4, approximately 54% are paid for through prepaid health plans or private insurance.

Figure 7-4: Payment Source for Delivery of Infants
San Luis Obispo County Residents, 2011



Data source: Automated Vital Statistics System, Public Health Dept., San Luis Obispo County.

Primary Prevention: Primary prevention activities for unplanned pregnancies include providing education regarding sexual responsibility, pregnancy, and contraceptives, and encouraging family planning.

Cost Analysis: According to the Department of Health and Human Services, unintended pregnancies in the United States are serious and costly. Socially, the costs can be measured in unintended births, reduced educational attainment and employment opportunity, increased welfare dependency, and increased potential for child abuse and neglect. For Medi-Cal care alone, national expenditures for unintended pregnancy totals billions of dollars annually. It has been estimated that the pregnancy cost for each woman who does not intend to be pregnant, yet is sexually active and uses no contraception, is about $3,200 annually.

Data Sources:

- Birth rates: California Department of Public Health, Center for Health Statistics, Vital Statistics. Data available from website: http://www.cdph.ca.gov/, Statistical Resources, Vital Statistics Query.
- Population data from State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000–2050.* Sacramento, CA, May 2010 or State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000-2050.* Sacramento, CA, July 2007.
- Cost data are from Healthy People 2010, U.S. DHHS.

Breastfeeding

Definition:

Breastfeeding initiation during early postpartum: includes exclusively breastfed infants and combination breastfed and formula fed infants at hospital prior to discharge home.

Breastfeeding at six months and one year: breastfed infants and combination breastfed and formula fed infants after discharge home at six months and one year of age.

Importance:

The World Health Organization, The American Academy of Pediatrics (AAP), the American College of Obstetrics and Gynecology (ACOG), and the United States Preventive Services Task Force all recommend exclusive breastfeeding for the first six months of life, with exceptions as listed below. In addition, the AAP, the ACOG, the American Academy of Family Physicians, and American Public Health Association recommend that most infants breastfeed for at least 12 months.

According to the Department of Health and Human Services:

- Breast milk is widely acknowledged to be the most complete form of nutrition for infants, with a range of benefits for infants' health, growth, immunity, and development.
- Benefits of breastfeeding include decreased rates of Sudden Infant Death Syndrome (SIDS), childhood obesity, leukemia, decreased new cases or severity of diarrhea, respiratory infections, and ear infections, among others, and reduced cost to the family.
- Breastfeeding has been shown to improve maternal health, with demonstrated effects, including reduction in postpartum bleeding, earlier return to pre-pregnancy weight, reduced risk of pre-menopausal breast cancer, and reduced risk of osteoporosis, continuing long after the postpartum period.
- Universal breastfeeding is not recommended in the United States. Women who use illicit drugs, who have active, untreated tuberculosis, or who test positive for Human Immunodeficiency Virus (HIV), as well as those who use certain prescribed drugs, should not breastfeed.
- Breastfeeding rates are about 50% lower among African American children compared to white children, and compared with middle- and upper-income families, children in low-income families are less likely to be breastfed.

National Objective:

According to Health People 2020 objectives, increase the proportion of mothers who breastfeed their babies:

- Ever to 81.9%.
- At 6 months to 60.6%.
- At 1 year to 34.1%.

Increase the proportion of mothers who exclusively breastfeed their babies:

- Through 3 months to 46.2%.

- Through six months to 25.5%.

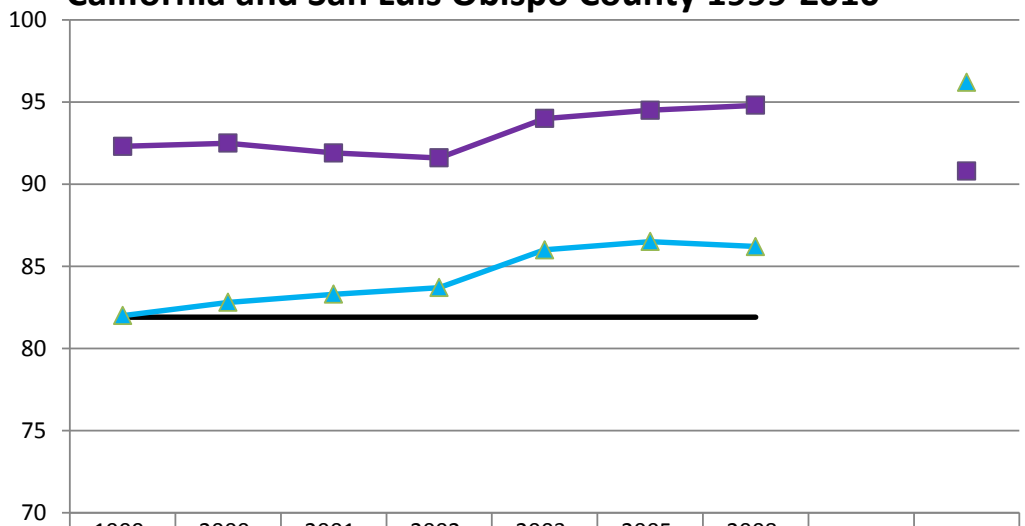
Key Findings:

Key findings for breastfeeding initiation, as shown in Figure 8-1, include:

- The number of mothers initiating breastfeeding in infants was higher in San Luis Obispo County compared to the state of California prior to 2010. In 2010, the form used to collect data was changed, so data in 2010 cannot be compared to prior years. The prior years are included for historical purposes only.
- Both the state and SLO County have achieved the Healthy People national objectives for 2020 regarding breastfeeding initiation.
- The number of breastfed infants per 100 hospital births has increased from 1999 to 2009.

Between July 2010 and June 2011, 51.1% of all infants enrolled in the Women, Infant and Children (WIC) program were breastfeeding. Of the breastfeeding infants approximately 70.5% were exclusively breastfeeding and 29.5 % were combination feeding (breast milk + formula). These data, however, may not be representative of all infants in San Luis Obispo County.

Figure 8-1: Breastfeeding Inititation
California and San Luis Obispo County 1999-2010



	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005	2005-2007	2008-2009	Reset	2010
2020 National Objective	81.9	81.9	81.9	81.9	81.9	81.9	81.9		81.9
San Luis Obispo County	92.3	92.5	91.9	91.6	94	94.5	94.8		90.8
California	82	82.8	83.3	83.7	86	86.5	86.2		96.2

Data source: California Dept. of Public Health, Statistics, Breastfeeding Statistics
NOTE: Data for 2010 should not be compared to previous years due to changes in the data collection form. Prior years are included

Primary Prevention:

To increase breastfeeding rates among those at highest risk, recommendations from the Department of Health and Human Services include:

- Education of new mothers and their partners
- Education of health providers
- Changes in routine maternity ward practices
- Social support, including support from employers
- Greater media portrayal of breastfeeding as the normal method of infant feeding

Data Sources:

Data sources for this report include:

- The 25th Anniversary of the Surgeon General's workshop on breastfeeding and human lactation: The status of breastfeeding today (2009)
- California Department of Public Health, Center for Health Statistics, County Health Status Profiles 2003-2010; available at: http://www.cdph.ca.gov/programs/OHIR/Pages/default.aspx
- California Department of Public Health Breastfeeding Statistics, available at: http://www.cdph.ca.gov/data/statistics/Pages/BreastfeedingStatistics.aspx
- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/
- San Luis Obispo County Public Health Department Women, Infants and Children (WIC) data.

Teen Births

Definition:

Teen births are the number of live births per 1,000 adolescent female residents by age of delivery for age categories of (a) less than 15 years, (b) 15 to 17 years of age, and (c) 18 to 19 years of age by the specified year(s).

Importance:

According to the Department of Health and Human Services:

- There are many problems and challenges associated with unwanted pregnancies. For teenagers, the problems associated with unintended pregnancy are compounded and their consequences are well documented: reduced educational attainment, fewer employment opportunities, increased likelihood of welfare dependency, and poorer health and developmental outcomes.
- Teenage mothers are also less likely to get married or stay married, less likely to complete high school or college, and more likely to live in poverty than their non-pregnant counterparts.
- Infants born to teenage mothers, especially under age 15, are more likely to suffer from low birthweight, neonatal mortality, and sudden infant death syndrome; and they may be at greater risk of child abuse, neglect, and behavioral and educational problems at later stages.
- The California Department of Finance estimates a 23% decrease in annual teen births between 2003 and 2008.

National Objective:

The Healthy People 2020 objective related to teen pregnancies is to reduce pregnancies among females aged 15-17 to no more than 36.2 per 1,000 adolescents and among females aged 18-19 to no more than 105.9 per 1,000 adolescents.

Key Findings:

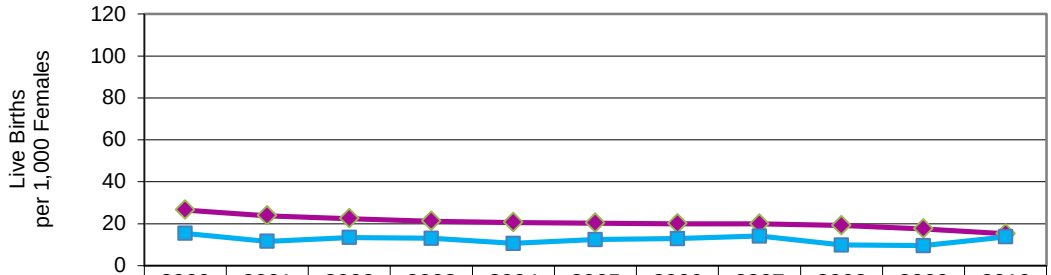
Less than 15 years: In San Luis Obispo County, the number of teen births has ranged between 1 and 6 each year from 1993 through 2011. Birth rates for this age group have not been calculated, since they would be unreliable and a comparison with state rates would not be valid. The statewide birth rate among teen females ages 15 and younger has been declining since 1992.

15 – 19 years: The age-specific teen birth rates for the 15-17 and 18-19 year age groups are summarized in Figures 9-1 and 9-2, respectively. The teen birth rate in San Luis Obispo County has been consistently lower than the state. State rates have been declining for both age groups. SLO County rates have generally been declining for 15-17 year olds, as well as for 18-19 year olds. However, in 2010, teen birth rates fell throughout the State, but rose in San Luis Obispo County. San Luis Obispo County has met the Health People 2020 objective related to teen pregnancies.

During 2007-2009, San Luis Obispo ranked 8th out of 58 counties (i.e., 7 counties had a lower teen birth rate than San Luis Obispo) for birth rates among the 15-19 year age group (per the California Department of Public Health County Health Status Profiles 2011).

Figure 9-1: Teen Births (15 - 17 Years of Age)

San Luis Obispo County and California, 2000-2010

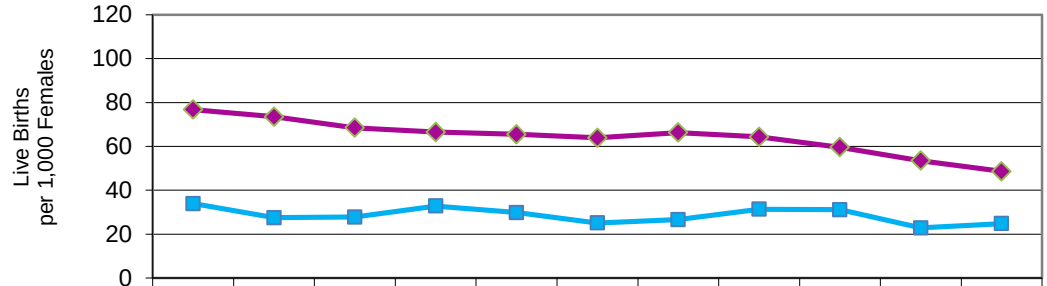


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
California	26.5	23.8	22.4	21.2	20.6	20.3	20.0	19.9	19.1	17.5	15.2
San Luis Obispo	15.4	11.6	13.4	13.0	10.6	12.4	12.9	14.1	9.8	9.5	13.7

Data source: Caifornia Department of Public Health, Vital Statisitcs Query. Population Estimates from State Department of Finance: Race/Ethnic Population with Age and Sex Detail, 2000-2050, July 2007

Figure 9-2: Teen Births (18 - 19 Years of Age)

San Luis Obispo County and California, 2000-2010



	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
California	76.8	73.5	68.5	66.5	65.5	63.9	66.3	64.3	59.6	53.5	48.6
San Luis Obispo	33.9	27.5	27.8	32.8	29.8	25.1	26.6	31.3	31.1	22.8	24.8

Data source: California Department of Public Health, Vital Statistics Query. Population Estimates from State Department of Finance: Race/Ethnic Population with Age and Sex Detail, 2000-2050, July 2007

Community Resources:

The Public Health Department works with a variety of community organizations, all of which offer activities to increase youth abstinence and provide pregnancy prevention:

- Young men's club
- Adolescent Family Life Program (AFLP)
- Special teen clinics in high-risk areas
- Family Planning
- Emergency contraception

Data Sources:

Data sources for this report include:

- California Department of Public Health, Center for Health Statistics, Office of Health Information and Research. Data available from website: http://www.apps.cdph.ca.gov/vsq/Default.asp
- County Health Status Profiles 2009, Teen Birth Rates (California Department of Public Health: Birth Statistical Master Files, 1998-2009.)
- State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000–2050*. Sacramento, CA, July 2008.
- Cost data were obtained from the website for responsible parenting, facts and statistics: http://www.responsibleparenting.org/teen.html, 2000.

Low Birthweight

Definition:

Low Birthweight: Proportion (percent) of live-born infants who are of low birthweight (under 2,500 grams or 5.5 pounds).

Very Low Birthweight: Proportion (percent) of live-born infants who are of very low birthweight (under 1,500 grams or 3.3 pounds).

Importance:

According to the Department of Health and Human Services:

- Low birthweight babies are at a significantly greater risk of death and long-term disabilities such as cerebral palsy, autism (in girls), mental retardation, vision and hearing impairments, and other developmental disabilities.
- Despite their low prevalence, expenditures for the care of low birthweight infants total more than half of the costs incurred for all newborns.
- Some of the major risk factors for low birthweight babies include the use of alcohol and tobacco during pregnancy, low pre-pregnancy weight, and low pregnancy weight gain.
- The highest incidence (13.5%) of low birthweight babies are born to mothers under the age of 15 years.
- African-American babies are twice as likely to be very low birthweight than Caucasian babies.
- Over half of twins and other multiple birth babies have a very low birthweight.

National Objectives:

The Healthy People national objectives for 2020 are to:

- Reduce low birthweight incidence to no more than 7.8 percent of all live births. This is an increase from the HP 2010 target of 5%.
- Reduce very low birthweight to no more than 1.4 percent of live births.

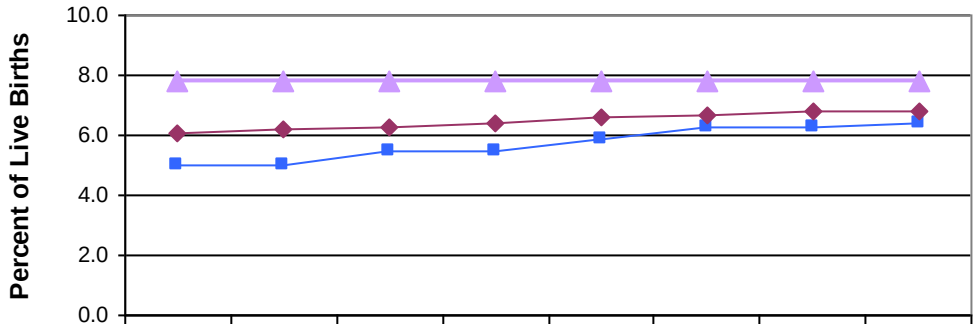
Key Findings:

Some of the key findings reveal:

- San Luis Obispo County has consistently had a lower percentage of low birthweight infants compared to the state from 1994-2009, as shown in Figure 10-1. The gap is lessening as San Luis Obispo's percentage increases gradually.
- San Luis Obispo County ranked 25th out of the 58 California counties (i.e., 24 counties had a lower percentage of low birthweight infants born to residents compared to San Luis Obispo County) during 2006-2008.
- Since 1995, SLO County has met the Healthy People 2010/2020 low birthrate goals.
- The percentage of very low birthweight infants (less than 1,500 grams at birth) in San Luis Obispo County since 1992 has ranged between 0.7 and 1.5%. The numbers are almost the same statewide.

Figure 10-1: Low Birthweight Infants (<2500 grams)

California and San Luis Obispo County, 1994-2009



	1994-1996	1997-1999	2000-2002	2001-2003	2002-2004	2003-2005	2005-2007	2007-2009
San Luis Obispo County	5.0	5.0	5.5	5.5	5.9	6.3	6.3	6.4
California	6.1	6.2	6.3	6.4	6.6	6.7	6.8	6.8
HP 2020	7.8	7.8	7.8	7.8	7.8	7.8	7.8	7.8

Data source: County Health Status Profiles, California Department of Public Health, Center for Health Statistics, 1996-2010.

Primary Prevention Activities:

Several Family Health Services programs strive to enhance prenatal nutrition, decrease tobacco use, and encourage early entrance into prenatal care in order to improve the health of the mothers and decrease the rate of low birthweight infants. Primary prevention activities include:

- Reducing the incidence of unintended pregnancies through sexuality and contraceptive education.
- Home visits by Public Health Nurses for high-risk pregnant women to support the pregnancy through health monitoring, education, and risk reduction counseling for behaviors such as smoking, substance abuse, and poor nutrition.
- Ensuring that smoking cessation services and other substance abuse treatment is available to all pregnant women.
- Increasing access to prenatal care and promoting its importance.
- Implementation of the 4P's Plus program Countywide to assess all pregnant women for the use of substances (alcohol, drugs) during pregnancy, then providing support services and education.

Cost Analysis:

Costs for babies who are born too small and need specialized care in a neonatal intensive care unit range from $1,000 to more than $3,000 per day. The length of stay in the neonatal intensive care unit may be lengthy, especially if there are complications. The average lifetime costs for one premature baby are conservatively estimated at $500,000. Low birthweight accounts for 10 percent of all health-care costs for children. Investing in prenatal care is cost effective as every $1 spent on prenatal care can save approximately $3.33 on hospital bills, birth complications, and low birthweight babies.

Data Sources:

- California Department of Public Health, Center for Health Statistics, County Health Status Profiles, available at: http://www.dhs.ca.gov/hisp/chs/OHIR/Publication/publicationindex.htm
- Cost data: March of Dimes website: http://www.modimes.org/
- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/

Infant Mortality

Definition:

Infant mortality is the number of infant deaths at less than 365 days of age per 1,000 live births. The birth cohort infant death rate is based upon births during a calendar year.

Importance:

According to the Department of Health and Human Services:

- Infant mortality is an important indicator of a nation's health and is a worldwide indicator of health status and social well-being. According to the National Center for Health Statistics, as of 2005, the U.S. ranked 30 out of 226 for its infant mortality rate, meaning that 29 countries have lower infant mortality rates than the US. However, according to the CIA factbook, in 2012, the US ranked 45th.
- In the past decade, a critical measure of increased risk for infant death, incidence of pre-term births, (births occurring before 37 weeks of gestation) has increased. The percentage of pre-term births has risen 36% since 1984. 12.3% of babies were pre-term in 2008.
- In 2009, there were 6.39 infant deaths per 1,000 live births in the US.
- The three leading causes of infant deaths are: 1) Congenital malformations, 2) Short gestation and low birth weight, 3)Sudden Infant Death Syndrome.
- The disparity in infant mortality rates between specific ethnic groups (African Americans, American Indian/Alaska Natives, Asian/Pacific Islander) persists. The rate for African Americans in 2009 was the highest among all racial groups. The Asian/ Pacific Islander rate was the lowest.
- The impact of preterm-related infant mortality is high for all racial and ethnic groups, but some groups are disproportionately affected. Nearly half (46%) of infant deaths to non-Hispanic black women and 41% of infant deaths to Puerto Rican women were preterm-related, compared to 32% for non-Hispanic white women.

National Objective:

The Healthy People national objective for 2020 is to reduce infant mortality to a rate of no more than 6.0 deaths per 1,000 live births. San Luis Obispo County's most recent rate of 3.1 (which is statistically unreliable) meets the national Healthy People 2020 objective.

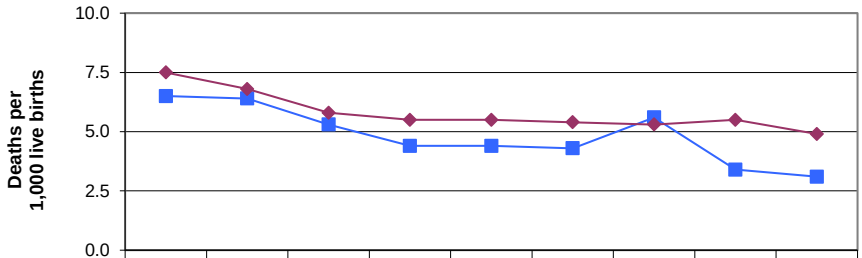
Key Findings:

- Between 1990 and 2009, San Luis Obispo County had a lower infant mortality rate compared to California, as shown in Figure 11-1. In 2004-2006, San Luis Obispo's seemed to jump, but has gone down since. Nevertheless, these numbers are statistically unstable due to the low number of occurrences.
- San Luis Obispo County achieved the national Healthy People 2010 objective of less than 4.5 infant deaths per 1,000 live births from 1999-

2004 and currently meets the 2020 objective of no more than 6 deaths per 1,000 live births.

- The United States' infant mortality rate has declined significantly since 1900, when the rate was approximately 100 per 1,000 live births (1 in 10). The United States' rate has remained fairly stable since 2000, when the rate was 6.89 compared to 6.39 per 1,000 live births in 2009.
- Rates of death by race for infants in the County are all statistically unreliable due to small numbers. As a result, it is impossible to evaluate the impact of race on infant mortality in San Luis Obispo County.

Figure 11-1: Infant Mortality
California and San Luis Obispo County, 1990-2009



	1990-1992	1993-1995	1996, 1997, 1999*	1999-2001*	2001-2003*	2002-2004*	2004-2006*	2006-2008*	2009*
San Luis Obispo County	6.5	6.4	5.3	4.4	4.4	4.3	5.6	3.4	3.1
California	7.5	6.8	5.8	5.5	5.5	5.4	5.3	5.5	4.9

**San Luis Obispo County infant mortality rate unreliable due to small numbers.*
Data source: County Health Status Profiles, California Department of Public Health Center for Health Statistics, 2011.

Primary Prevention Activities:

Primary prevention activities include:

- Promoting early prenatal care and a sufficient number of regular visits during pregnancy.
- Encouraging abstinence from tobacco (and second-hand smoke), alcohol and other drugs (including medications that may be harmful to the fetus or infant).
- Educating parents to put infants to sleep on their backs in order to prevent SIDS.
- Teaching proper use of child passenger safety seats to decrease risk of death or serious injury during motor vehicle collisions.

Cost Analysis:

The impact of infant mortality on family, friends, and society is not measurable. Specific cost data is not available.

Data Sources:

Data sources for this report include:

- California Department of Public Health, Center for Health Statistics, County Health Status Profile; available at: http://www.dhs.ca.gov/hisp/chs/OHIR/publicationindex.htm
- National data: March of Dimes website: http://www.modimes.org/
- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/
- World Factbook Infant Mortality Rate Ranking; available at: http://www.cdc.gov/omh/AMH/factsheets/infant.htm
- Leading Causes of Infant Death, CDC, National Center for Health Statistics; available at: http://www.cdc.gov/nchs/data

Childhood Immunizations

Definition:

Vaccines are biological substances used to stimulate the development of antibodies and thus confer active immunity against specific diseases. The proportion of children whose vaccinations are current are provided in this report for the following two categories:

(a) Children (ages two to 4 yrs-11 months) enrolled in child care programs
(b) Children in kindergarten

Importance:

According to the Department of Health and Human Services, vaccines can prevent debilitating and, in some cases, fatal effects of infectious diseases. The organisms that cause diseases such as polio, measles, rubella and pertussis have not disappeared. Rather, they have receded, but can and have reemerged if the vaccination coverage drops. Vaccines protect more than the vaccinated individual; they protect society as well. When vaccination levels in a community are at least 90%, the few who cannot be vaccinated, such as young children and persons with contraindications to vaccinations, often are indirectly protected because of herd immunity (i.e., high levels of vaccination in the population help limit the spread of the disease).

National Objective:

Healthy People 2020 objectives related to childhood vaccinations include:

- Achieve and maintain effective vaccination coverage levels of at least 80 percent for all universally recommended vaccines among young children (aged 19 to 35 months) for DTaP, Polio, MMR, Hepatitis B, Hib, Varicella, and Pneumococcal conjugate vaccine.
- Maintain vaccination coverage levels of at least 95 percent for children in kindergarten. Target set for DTaP, Polio, MMR, Hepatitis B, and Varicella.

Key Findings:

<u>Childcare Programs</u>

- The percentage of 2 year to 4 year-11 month old children enrolled in child care programs in SLO County with all required vaccinations was slightly lower in 2010 (89.83%) than in 2009 (92.62%).
- San Luis Obispo met the Healthy People 2020 Goal of 80% coverage for DTaP, Polio, MMR, Hep B, Hib, and Varicella.
- Conditional entrants went up from 4.48% in 2009 to 5.78% in 2010; meaning more children were behind in their vaccination schedule when they started attending childcare.
- Personal Beliefs Exemption went up slightly from 3.92% in 2009 to 4.09% in 2010; signifying that some parents continue to be resistant to the benefits of immunizations.
- The Fall 2010 immunization results for child care programs are summarized below in Table 12-1.

Table 12-1: Child Care Center Immunization Assessment

Percentage of 2 – 4 Yrs -11 Months Old Enrollees Adequately Immunized, 2010

Category	California	San Luis Obispo County
Total Facilities Reporting	9,533	84
Number of Enrollees	489,082	3,009
% of Entrants with All Required Immunizations (excludes those with exemptions due to personal medical reasons or personal beliefs)	90.69%	89.83%
Total with all - Public Child Care Centers	92.87%	88.56%
Total with all - Private Child Care Centers	88.29%	88.4%
Total with all - Head Start Child Care Centers	96.67%	97.41%
Percent (%) vaccinated for:		
Diphtheria, tetanus, pertussis (4th dose)	94.6%	94.85%
Polio (3 doses)	96.5%	95.31%
Measles, mumps, rubella (1 dose)	96.4%	94.98%
Haemophilus influenzae type b (Hib) (1 dose)	97.5%	97.01%
Hepatitis B (3 doses)	95.3%	94.18%
Varicella (1 dose or MD documented disease)	95.8%	94.45%
Conditional Entrants	6.77%	5.78%
Exemption - Personal Medical Exemption	0.17%	0.30%
Exemption - Personal Beliefs Exemption	2.44%	4.09%

Data source: Fall 2010 Childcare Center Immunization Assessment Results, California Department of Public Health, Immunization Branch at http://www.cdph.ca.gov/programs/immunize/Documents/2010ChildcareAssessmentReport.pdf

Key Findings (continued):

Kindergarten Students:

- Between the years 2008 and 2010 the percentage of kindergarten students with all required vaccinations dropped 1% (from 91.7% to 90.7%) statewide and by 2.7% (from 89.6% to 86.9%) in San Luis Obispo County.
- The County fails to meet the Healthy People 2020 Goal of 95% coverage for all five vaccines: DTaP, MMR, Polio, Hepatitis B and Varicella.
- In Fall 2010, the percentage of San Luis Obispo County Kindergarten students with Personal Belief Exemptions (PBEs) increased from 3.92% in 2009 to 5.29% in 2010.
- See Table 12-2 for a summary of the immunization results for kindergarten students.
- Note: There are more conditional entrants into kindergarten than child care which may partially explain the overall lower coverage rate in the kindergarten age group; i.e., part of the issue may be record

availability/retention.

Table 12-2: Kindergarten Immunization Assessment

Percent of Enrollees Adequately Immunized, 2010

Category	California	San Luis Obispo County
Number of Schools	8,189	59
Number of Students	509,849	2,703
% of Entrants with All Required Immunizations	90.7%	86.9%
% Immunized for:		
Diphtheria, tetanus, pertussis (4 doses)	92.8%	88.83%
Polio (3 doses)	93.1%	89.49%
Measles, mumps, rubella (1st dose)	96.35%	93.13%
Measles, mumps, rubella (2nd dose)	93.12%	89.23%
Hepatitis B (3 doses)	95.7%	93.01%
Varicella (1 dose or documented disease)	96.1%	93.38%
Conditional Entrants	6.8%	7.58%
Exemptions - Personal Medical Exemption	0.19%	0.26%
Exemptions - Personal Beliefs Exemption	2.33%	5.29%

Data source: Fall 2010 Kindergarten Student Immunization Assessment Results, California Department of Public Health, Immunization Branch at http://www.cdph.ca.gov/programs/immunize/Documents/2010KindergartenAssessmentReport.pdf

Key Findings (continued):

Exemptions Due to Medical or Personal Beliefs:

California's School Immunization Law allows exemptions for personal or medical reasons; however, when there is a disease circulating in the community, non-immunized/exempt children can be at risk from other children as well pose a risk to other children. These children can be excluded from school during an outbreak of vaccine preventable disease. A study in 2000 (JAMA, Vol. 284, No. 24, p. 3145) found that children with Personal Belief Exemptions in child care and primary school were 62 times more likely to get measles and 16 times more likely to catch pertussis than immunized children. Parents considering a personal beliefs exemption for their child need to be aware of both the personal and community risks of exemption.

Primary Prevention Activities:

Primary prevention activities include:

- Using the California Immunization Registry (CAIR) to generate reminders for parents to keep children up to date on immunizations.
- Encouraging medical providers to offer all vaccinations to children, and provide appropriate education/discussion to parents who refuse/delay vaccinations.
- All school districts in SLO County are on the CAIR system. Private schools and childcare centers have also been joining CAIR. This

provides immediate access to children's vaccine status if conditionally enrolled.

- Encouraging parents to always bring their child's yellow immunization card to any doctor or clinic visit.
- Continuing to provide low-cost vaccines to all children at the Public Health Department, waiving fees when there is an inability to pay.
- Providing provider education on immunizations through the quarterly SLO Public Health Bulletin, regional trainings, provider email notifications, and the monthly School Nurse meeting.

Cost Analysis: According to Archives of Pediatrics & Adolescent Medicine December 2005, Economic Evaluation of the 7 Vaccine Routine Childhood Immunization Schedule in the US, 2001 reports "Direct and societal benefit-cost ratios for routine childhood vaccinations were 5.3 and 16.5, respectively." "Regardless of the perspective, the current routine childhood immunization schedule results in substantial cost savings".

Data Sources:

- Fall 2011 Child Care Center and Kindergarten Student Immunization Assessments, California Department of Public Health, Immunization Branch
- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/.

Communicable Disease Overview

Overview:

Communicable (infectious) disease control is one of the core functions of public health departments. Communicable disease services include education, prevention, surveillance, early diagnosis and treatment. Examples of communicable diseases include those transmitted from human to human, from vectors (e.g., infected ticks or mosquitoes) to humans, and from contaminated food or water to humans.

An overview of communicable diseases (and other diseases and health topics) can be found on the Centers for Disease Control and Prevention website, located at http://www.cdc.gov, under the Health Topics A-Z. In addition to general information, there are links to technical documents and other websites that provide more detailed information.

Reporting:

Timely reporting is crucial to the effectiveness of communicable disease control and prevention. California State law (California Code of Regulations(CCR), Title 17, Section 2500) requires health care providers and laboratories (CCR, Title 17, Section 2505), to report selected diseases and conditions to their local public health department. The confidentiality of patient information is protected. Some communicable diseases, such as pneumonia and influenza, do not have mandatory reporting requirements; however, death and hospitalization data for these two diseases are available. Other diseases, such as chicken pox are only required to be reported when hospitalization is necessary.

Key Findings:

Table 13-1 contains a summary of selected communicable diseases reported to San Luis Obispo County Health Department between 2001 and 2011 for residents (including those in institutional facilities). There may be differences between local and state data summaries if there were delays in reporting or if a disease was reclassified after initial reporting. The most frequently reported communicable diseases in San Luis Obispo County during the specified time period were:

- Sexually Transmitted Diseases: Chlamydia and Gonorrhea
- Hepatitis: Hepatitis C (chronic) and Hepatitis B (chronic)
- Intestinal Infections: Campylobacteriosis, Giardiasis, Salmonellosis, and Shigellosis
- Meningitis and Related Conditions: Viral Meningitis
- Other Diseases: Coccidioidomycosis (Valley Fever), Acquired Immunodeficiency Syndrome (AIDS), Tuberculosis and Pertussis (Whooping Cough)

See more details about AIDS, sexually transmitted diseases, Hepatitis A/B/C, tuberculosis, pneumonia and influenza in other designated chapter(s) within this Community Health Status Report.

Disease	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Sexually Transmitted											
Chlamydia	306	313	511	470	549	567	631	634	641	694	822
Gonorrhea	20	17	56	37	49	42	48	33	39	28	53
Syphilis (Prim/Sec)	0	8	10	12	13	9	18	41	6	0	1
Hepatitis											
Hepatitis A	3	7	4	4	5	12	5	13	1	1	8
Hepatitis B (Acute)	1	1	1	6	4	3	1	0	1	0	2
Hepatitis B (Chronic)	39	66	36	35	90	69	28	43	54	36	50
Hepatitis C (Community)	152	267	148	212	226	193	101	629	260	274	309
Hepatitis C (Correctional)	179	946	458	190	277	265	266	516	877	582	410
Intestinal Infections											
Campylobacteriosis	33	18	30	43	54	54	53	45	96	98	92
Giardiasis	30	6	12	11	19	21	7	9	10	9	16
Salmonellosis	31	8	22	25	23	42	27	26	14	35	21
Shigellosis	5	1	2	1	3	20	4	8	3	5	3
Amebiasis	2	0	0	1	1	1	0	1	0	1	0
E. Coli O157:H7	2	2	2	2	6	2	4	5	6	2	3
Cryptosporidiosis	5	3	8	53	6	23	18	8	25	24	11
Meningitis and Encephalitis											
Meningitis, viral	17	9	28	29	22	21	27	22	27	35	25
Meningitis, bacterial	6	3	3	4	7	3	4	4	3	4	7
Meningococcal meningitis	0	0	1	0	0	1	0	1	0	0	0
Meningococcemia	2	0	0	0	1	2	0	0	0	0	1
Meningitis, unknown	0	1	3	2	1	2	1	1	1	1	1
Meningitis, fungal	0	0	0	0	3	2	0	0	1	3	3
Encephalitis, viral	0	1	0	2	2	1	0	1	3	3	0
Vector-Borne											
Lyme Disease	2	0	2	0	1	4	9	3	4	0	0
Malaria	2	0	0	0	1	0	1	1	2	2	1
Other Diseases											
Coccidioidomycosis (Valley Fever)	80	27	71	72	116	147	129	129	86	102	226
AIDS	20	22	13	8	21	1	9	9	8	3	2
HIV*	-	-	-	-	-	-	27	27	26	19	14
Tuberculosis	11	7	8	4	8	9	2	2	3	4	6
Pertussis	2	1	1	0	109	75	16	16	2	382	21
Measles (Rubeola)	0	0	0	0	0	0	0	0	0	0	0
Rubella	0	0	0	0	0	0	0	0	0	0	0
Tetanus	0	0	0	0	0	0	0	0	0	0	0

Data source: San Luis Obispo County Health Dept., Public Health Dept., except Tuberculosis data from California DHS. Note that the large number of Hepatitis C (Chronic) cases reported in 2002, 2008, 2009 were partially due to late reporting by one institution. Some cases were from prior years.

*HIV was not consistently reported prior to 2007, so no data is available for prior years

HIV/AIDS

Definition:

Human Immunodeficiency Virus (HIV) is the virus that causes Acquired Immune Deficiency Syndrome (AIDS). AIDS is considered to be the advanced form of HIV and occurs when people with HIV develop certain infections due to their weakened immune system or when their CD4+ cell count drops below 200 (the CD4+ cell is an immune system cell involved in protecting against viral, fungal, and protozoal infections).

In 2006, California passed Senate bill 699 requiring physicians to report all new HIV positive test results using names instead of unique identifiers as was previously established for persons with HIV. While this now allows consistent tracking of HIV, all previously reported data is considered unreliable.

Importance:

According to the Joint United Nations Programme and the World Health Organization on HIV/AIDS, as of 2010, the following trends (worldwide) were evident:

- 34.0 million people were estimated to be living with HIV.
- During 2010, AIDS caused the deaths of an estimated 1.8 million people, including 250,000 children under the age of 15.
- An estimated 2.7 million people worldwide were newly infected with HIV in 2010, including 390,000 children.

According to the Centers for Disease Control and Prevention:

- An estimated one million persons are believed to be living with HIV in the US as of 2008. One in five (21%) of those people are unaware of their infection.
- Most transmission of HIV in the United States is among sexual partners of people with HIV, with approximately 50% of new infections occurring among men who have sex with men (MSM).

According to the Department of Health and Human Services:

- Recently introduced therapies for HIV/AIDS have reduced illness, disability, and death due to AIDS; however, access to care may limit progress in this area.
- There is no cure for HIV, and the current treatments are difficult to take because of a complicated dosing schedule, severe side effects and long term complications.
- A disproportionate percentage of HIV and AIDS cases occur among ethnic minorities, especially Hispanics and African Americans.
- Data indicates that as Sexually Transmitted Disease (STD) rates increase, HIV rates also increase. STDs can increase the risks for HIV transmission.

National Objective:

In July 2010, the Department of Health and Human Services released the National HIV/AIDS Strategy. Goals include lowering the annual number of infections by 25%, reducing HIV transmission by 30%, and increasing the percentage of people living with HIV who know their serotype status from 79% to 90%. Healthy People

2020 Objectives include:

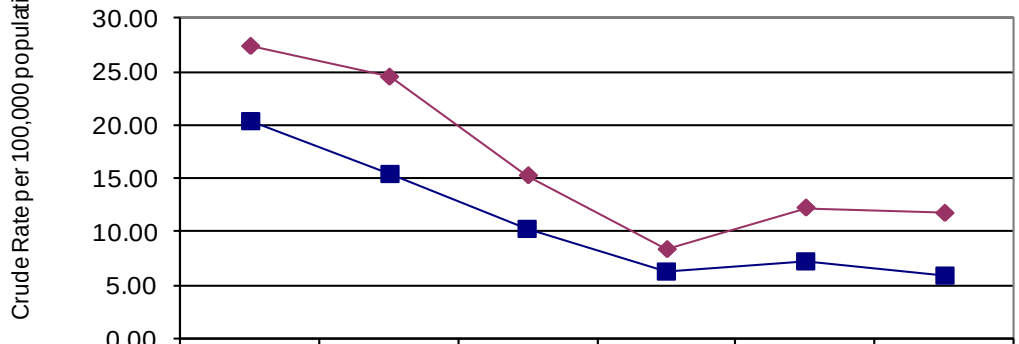
- Reduce the number of deaths attributed to HIV infection to 3.3 deaths per 100,000 people.
- Reduce the rate of HIV transmission among adolescents and adults to 3.5 new infections per 100 persons living with HIV. The baseline rate as of 2006 was 5 new infection per 100 persons living with HIV.

Key Findings: The key findings for HIV/AIDS include:

- As shown in Figure 14-1, the crude rate for AIDS incidence has generally decreased for California, as well as the San Luis Obispo County, since the period 1994-1996. The California Department of Public Health has not released new estimates for AIDS incidence since last year.
- As shown in Figure 14-2, the incidence of AIDS cases among county institution residents (California Men's Colony, Atascadero State Hospital, and the California Youth Authority) has decreased in relation to that of the general population. The incidence of community AIDS cases rose in 2009, but has since declined.
- As shown in Figure 14-3, the number of AIDS deaths has remained low due to the introduction of Highly Active Anti-Viral Therapy (HAART) in 1994.
- A California law, Senate bill 699, passed on April 17, 2006 requiring providers to report all new HIV positive test results by name instead of by coded identifiers as was previously established. This will eventually provide a better picture of HIV rates state- and countywide.
- As shown in Figure 14-4, females in our county usually contracted HIV through injection drug use and heterosexual contact while men usually contracted HIV from male-to-male sexual contact or male-to-male sexual contact coupled with injection drug use.

Figure 14-1: AIDS Incidence*

California and San Luis Obispo County, 1994-2009

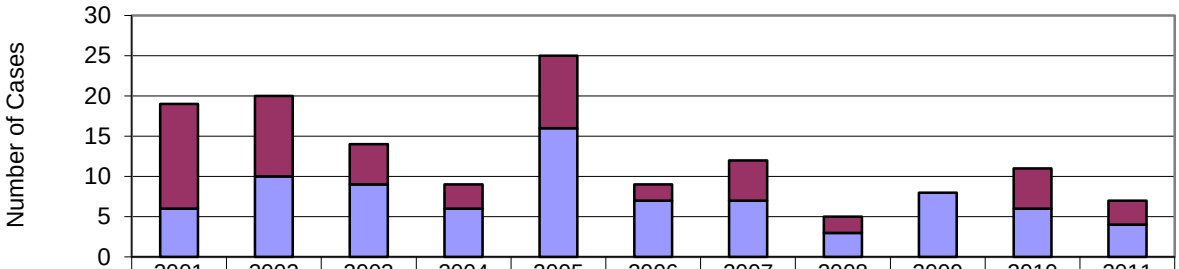


	1994-1996	1997-1999	2000-2002	2003-2005	2005-2007	2007-2009
San Luis Obispo County	20.43	15.45	10.23	6.3	7.2	5.90
California	27.36	24.48	15.23	8.3	12.2	11.70

**Note: Population limited to age 13 and over as of 1997-1999 data; prior years included all ages.*
Data source: County Health Status Profiles, California Dept. of Health Services, Center for Health Statistics.

Figure 14-2: AIDS Cases

San Luis Obispo County Residents
Community and Institutionalized**, 2001-2011

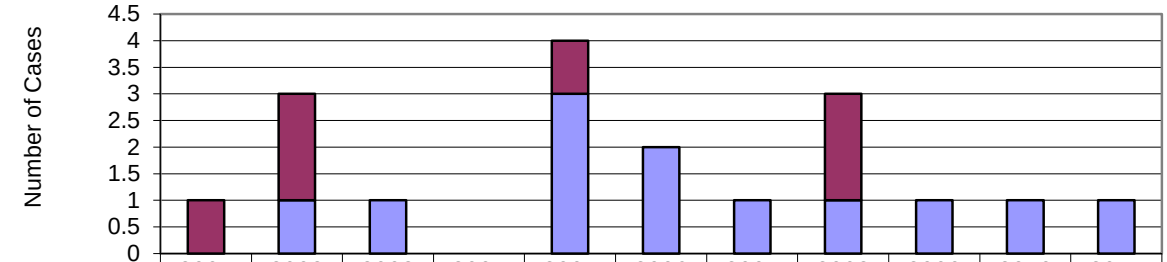


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Institution	13	10	5	3	9	2	5	2	0	5	3
Community	6	10	9	6	16	7	7	3	8	6	4

Data source: San Luis Obispo Confidential AIDS database.
*** Institutionalized includes those at California Men's Colony, Atascadero State Mental Hospital, and the California Youth Authority.*

Figure 14-3: AIDS Deaths

San Luis Obispo County Residents
Community and Institutionalized*, 2001-2011

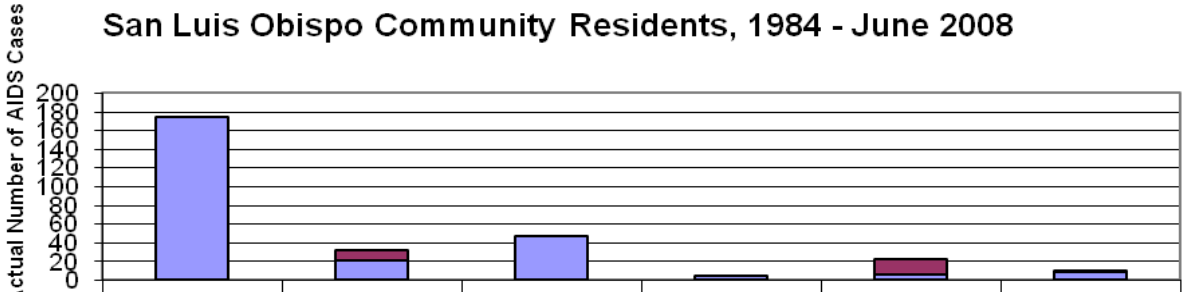


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Institution	1	2	0	0	1	0	0	2	0	0	0
Community	0	1	1	0	3	2	1	1	1	1	1

Data source: San Luis Obispo Confidential AIDS database.
** Institutionalized includes those at California Men's Colony, Atascadero State Mental Hospital, and the California Youth Authority.*
After 2009, data does not include SLO County cases that were in another county when they died.

Figure 14-5: AIDS Cases by Mode of Transmission and Gender

San Luis Obispo Community Residents, 1984 - June 2008



	Male to Male	Injection Drug Use	MSM and IDU*	Hemophilia/ Transfusion	Heterosexual contact	Undetermined
Females	0	10	0	0	16	1
Males	174	21	47	4	6	9

Data source: California Department of Public Health, Office of AIDS, HIV/AIDS Surveillance Report and San Luis Obispo County AIDS Program confidential database.
** MSM = Male-to-male sexual contact; IDU = Injection drug use.*

Primary Prevention Activities:

Primary prevention activities include:

- Implementing prevention programs aimed at decreasing high-risk behaviors such as multiple partners, unprotected sex, drug use, etc.
- Educating groups with a high prevalence or increasing prevalence of HIV infection such as African Americans, Hispanics, women and men who have sex with men.
- Encouraging pregnant women and healthcare providers to test for HIV and including information about how to reduce the risk of transmitting HIV to newborns.
- Promoting needle exchange programs, drug rehabilitation and counseling for at-risk drug users.
- Taking steps to decrease transmission of STDs overall to reduce risk of transmitting HIV.
- Testing people who may be unaware of possible infection and referring them to medical care, counseling, health education, and transmission risk reduction services

Cost Analysis:

The latest estimates indicate that as of the end of 2006, 1,106,400 people in the United States were infected with HIV, with approximately 56,300 new infections that year. According to the California Department of Public Health, the lifetime costs of health care associated with HIV can range from $71,143 (for low end care) to $424,763 (for high-end care). HIV prevention efforts are very cost-effective in the face of such high costs for care for persons infected. Prevention efforts include availability of culturally and linguistically appropriate HIV counseling and testing, partner counseling, and referral systems for individuals at high risk for HIV infection.

According to the Congressional Research Services Report for Congress, in Fiscal Year 2004, total United States federal HIV/AIDS spending was estimated to be $18.5 billion. These costs were divided among care and assistance (63%), research (16%), prevention (12.0%), and income support programs (9%).

Community Resources:

Testing/Prevention: Public Health offers limited HIV antibody testing at Public Health sites in the county. Planned Parenthood, County Drug and Alcohol Services, the Community Action Partnership and the AIDS Support Network provide HIV prevention education to those at risk for contracting HIV.

Services to People with HIV: The AIDS Support Network offers services to people with HIV and their families through the Early Intervention Program, AIDS Drug Assistance Program, Ryan White Emergency Care Act funds and the Housing Opportunities for People with AIDS (HOPWA) Program.

Data Sources:

Data sources for this report include:

- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/
- California Department of Public Health, Center for Health Statistics,

County Health Status Profiles.

- California Department of Public Health, Office of AIDS, HIV/AIDS Surveillance Report; available at: http://www.cdph.ca.gov/aids/
- Epidemiologic Profile HIV/AIDS in San Luis Obispo County, San Luis Obispo County Public Health Department AIDS Program, June 2007; available at: http://www.slocounty.ca.gov/health/publichealth/communityhealth/aids.htm
- Congressional Research Service Report for Congress, AIDS Funding for Federal Government Programs FY1981-2005; available at: http://fpc.state.gov/documents/organization/34819.pdf
- Prevention Pays, Centers for Disease Control; available at: http://www.cdc.gov/hiv/resources/reports/comp_hiv_prev/prev_pays.htm

Sexually Transmitted Infections

Definition: A sexually transmitted infection (STI) is an infectious disease transmitted through sexual activity. There are about 25 commonly known organisms that cause STIs. The most common STIs are Chlamydia, Gonorrhea, Genital Herpes, HPV and Syphilis.

Importance: According to the Department of Health and Human Services:

- Despite the fact that STIs are quite preventable, they continue to be an increasingly large public health concern.
- STIs have many long lasting repercussions including decrease in reproductive health, danger to fetal health, perinatal problems and even cancer.
- In many STIs, there are no apparent symptoms, allowing for the disease to be spread unknowingly and leading to long-term health consequences for the infected individual.
- Limited or lack of access to health care along with high-risk sexual activity is many times directly correlated to a larger proportion of STIs amongst certain social groups such as migrant workers, sex workers, incarcerated populations and adolescents.

National Objective: The Department of Health and Human Services seeks to "promote responsible sexual behaviors, strengthen community capacity, and increase access to quality services to prevent sexually transmitted diseases and their complications." The Healthy People 2020 objectives for the most common STIs are as follows:

- Reduce proportion of females aged 15 to 24 who attended family planning clinics in the past 12 months infected with Chlamydia trachomatis to only 6.7 percent.
- Reduce gonorrhea to 257 new cases per 100,000 people for females and to 198 new cases per 100,000 people for males.
- Reduce occurrence of primary and secondary syphilis to 1.4 cases per 100,000 females and to 6.8 cases per 100,000 males.
- Reduce the percentage of young adults infected with genital herpes due to herpes simplex type 2 to 9.5 percent.

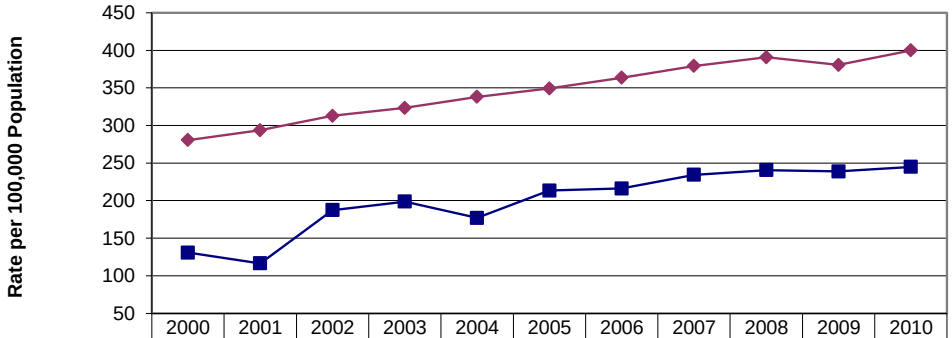
Key Findings: The key findings for chlamydia, gonorrhea and syphilis include:

- Chlamydia was the most commonly diagnosed STI in San Luis Obispo County in 2010. The rate of reported Chlamydia in San Luis Obispo County, while significantly lower than the State, as shown in Figure 15-1, followed the State's trend in 2010, exhibiting a slight increase from 2009.
- Between 2001 and 2010, the rate of reported gonorrhea in San Luis Obispo County was significantly lower than the State's, as shown in Figure 15-2. San Luis Obispo County has met the Healthy People objective of no more than 257 new female and 198 new male cases per 100,000 people.

- As shown in Figure 15-3, the rate of reported syphilis (primary and secondary) increased markedly in California from 2001 to 2008 but in 2009 began to decrease. An outbreak in a State Institution led to a large increase in cases in 2008 in SLO County.

Figure 15-1: Reported Incidence of Chlamydia
San Luis Obispo County and California, 2000 - 2010

Healthy People 2020 Objective = none established for all ages.

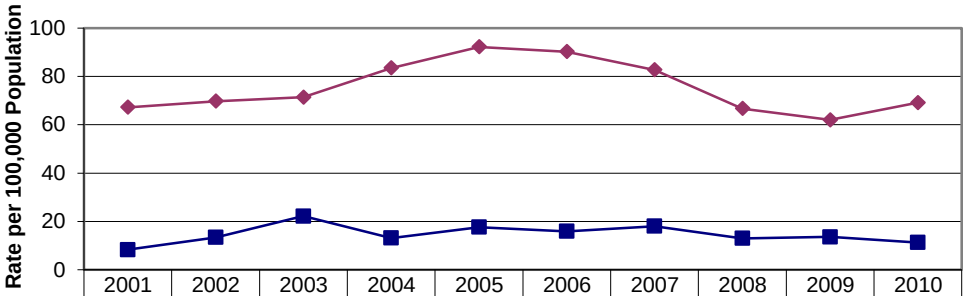


	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
San Luis Obispo County	130.8	116.5	187.4	198.8	176.9	213.3	216.1	234.3	240.7	238.8	244.9
California	280.5	293.6	312.9	323.4	338.1	349.2	363.5	379.2	390.8	380.6	400.0

Data source: State of California, Department of Health Service; Sexually Transmitted Disease Control Branch.

Figure 15-2: Reported Incidence of Gonorrhea
San Luis Obispo County and California, 2001 - 2010

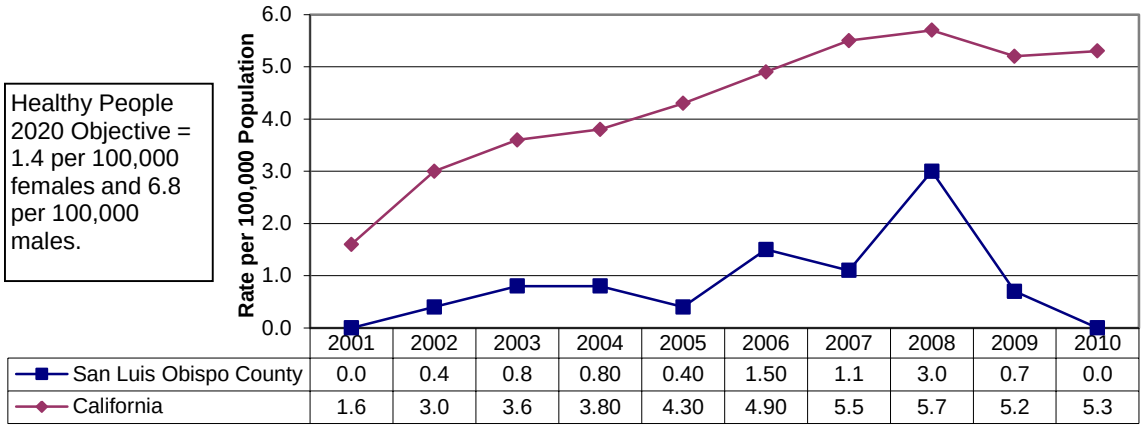
Healthy People 2020 Objective = 257 per 100,000 females and 198 per 100,000 males



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
San Luis Obispo County	8.3	13.4	22.2	13.1	17.6	15.9	18.0	13.0	13.6	11.3
California	67.2	69.7	71.4	83.5	92.2	90.2	82.7	66.7	62.0	69.1

Data source: State of California, Department of Health Service; Sexually Transmitted Disease Control Branch.

Figure 15-3: Reported Incidence of Primary & Secondary Syphilis
San Luis Obispo County and California, 2001 - 2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
San Luis Obispo County	0.0	0.4	0.8	0.80	0.40	1.50	1.1	3.0	0.7	0.0
California	1.6	3.0	3.6	3.80	4.30	4.90	5.5	5.7	5.2	5.3

Data source: State of California, Department of Health Service; Sexually Transmitted Disease Control Branch.

Primary Prevention Activities:

Primary prevention activities include:

- Encouraging abstinence as the only way to avoid STIs.
- Providing easy access to health care for the economically and/or socially disadvantaged to allow for increased detection and treatment among high-risk groups.
- Providing comprehensive information about all aspects of STIs in sexual education classes in schools.
- Suggesting that STI screening be conducted for those deemed to be at risk of contracting and/or spreading STIs.
- Distributing information throughout the community, focusing on those individuals at higher risk of contracting STIs and explaining how to reduce the risk of contracting STIs through use of condoms and monogamy.

Community Resources:

The Community Action Partnership of San Luis Obispo County, Inc. (formerly the Economic Opportunity Commission, or EOC) Family Planning, Planned Parenthood and the County Public Health Department all offer no cost to low cost birth control and STI information as well as screening for many STIs.

Data Sources:

Data sources for this report include:

- California Department of Health Services, Department of Public Health, Sexually Transmitted Disease Control Branch.
- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/.

Hepatitis A, B AND C

Definitions:

Viral hepatitis is caused by infection with any of at least five distinct viruses. The illnesses caused by hepatitis A virus, hepatitis B virus, and hepatitis C virus are all reportable diseases.

- Hepatitis A is a liver disease caused by the hepatitis A virus (HAV). HAV is most commonly spread person-to-person by fecal contamination and oral ingestion. The virus is often spread through food handling by infected individuals. Hepatitis A is the most easily treated of the three strains.
- Hepatitis B is a liver disease caused by the hepatitis B virus (HBV). Hepatitis B can cause lifelong infection, cirrhosis (scarring) of the liver, liver cancer, liver failure, and death. HBV is most commonly transmitted through sexual contact or through blood exposure. HBV can also be transmitted from mother to infant during birth.
- Hepatitis C is a liver disease caused by the hepatitis C virus (HCV). Although detectable in the blood of persons who have the disease, HCV infection tends to have very mild or no symptoms during the acute phase of the disease. In 75-85 percent of the cases, it becomes a chronic infection, which can lead to cirrhosis, liver disease and/or liver failure. HCV is typically spread by blood-to-blood contact between an infected person and an uninfected person.

Importance:

According to the Centers for Disease Control and Prevention:

- Estimated number of new hepatitis A infections per year has declined from an average of 234,000 in 1980 to 21,000 per year in 2009. Children have the highest rate of HAV infection in the country.
- The estimated number of new hepatitis B infections per year has declined from a high of 287,000 in 1985 to 38,000 in 2009. Rates are highest for males, particularly those aged 25-44 years.
- The most common chronic blood-borne viral disease in the United States is hepatitis C virus (HCV). An estimated 4.1 million (1.6%) Americans have been infected with HCV, of whom ~3.2 million are chronically infected.
- Most hepatitis cases occur in young adults who have multiple sexual partners or unprotected sex, intravenous drug users, those who have been incarcerated, and homosexual men.

National Objective: The Healthy People 2020 overall goal is to reduce the number of new cases of hepatitis A, B or C by promoting proven prevention methods. The specific objectives are as follows:

- Reduce new cases of hepatitis A to only 0.3 per 100,000 people.
- Reduce hepatitis B infection in adults aged 19 and older to a rate of 1.5 per 100,000 people. Reduce new hepatitis B infection in persons aged 2 to 18 years to 0 cases.
- Decrease occurrence of hepatitis C to only 0.2 new (acute) cases per 100,000 people.

Key Findings: The key findings for hepatitis A, B and C include:

- Hepatitis A, B and C: The number of reported hepatitis cases is shown in Table 16-1. The majority of the reported hepatitis cases were hepatitis C (chronic). The number of hepatitis C cases increased markedly in 2001 through 2003. The very large increase in 2002 was largely due to late reporting (to the Public Health Department) by one of the institutions, as some of these cases were from prior years. There was also a tremendous increase in 2008. Per the California Department of Health Services, "the apparently increasing trend [in hepatitis C cases] is most likely a function of increased testing and reporting rather than an indication of increasing number of new hepatitis C cases." The State has provided funding for increased public education and outreach related to hepatitis C. In 2000, the San Luis Obispo County Hepatitis C Project began to provide hepatitis C testing in conjunction with the County's State-funded HIV testing program. Although discontinued in 2009, Public Health testing for Hepatitis C has recently resumed. The SLO Hep C project provides support services.

Table 16-1: Reported Cases of Hepatitis

San Luis Obispo County Residents, 2001 - 2011

Virus	Number of Cases Reported by Year										
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Hepatitis A	3	7	4	4	5	12	5	13	1	1	1
Hepatitis B (Acute)	1	1	1	6	4	3	1	0	1	0	2
Hepatitis B (Chronic)	39	66	36	35	90	69	28	43	54	32	50
Hepatitis C (Acute)	0	1	1	0	1	6	3	2	0	0	0
Hepatitis C (Chronic)	336	1213	612	402	503	452	364	1132	1137	856	719

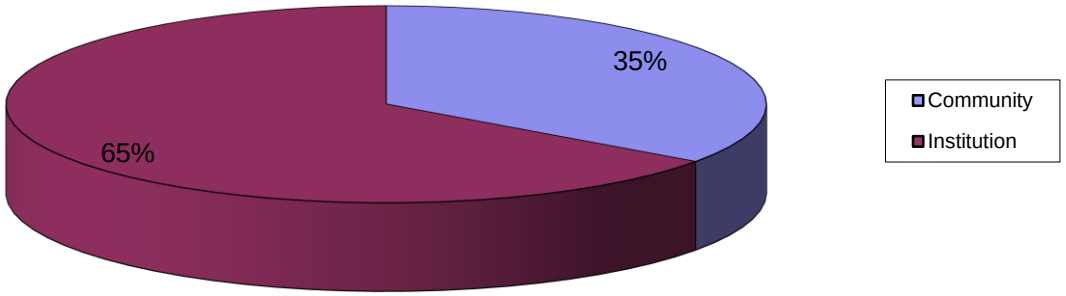
Note that the large number of Hepatitis C (Chronic) cases reported in 2002 (n = 1,212) were partially due to late reporting to the Public Health Department by at least one of the institutions. Some of these cases were from prior years. NR = not reportable.

Data source: San Luis Obispo County Health Department, Automated Vital Statistics System, CalREDIE

Key Findings (contintued):

- Institutionalized Cases of Hepatitis:
  - The majority (65%) of the ~8,300 hepatitis C cases during 1997–2011 were among institutionalized residents, as shown in Figure 16-1.
  - Roughly half (51%) of the 495 hepatitis B (chronic) cases during 1997-2008 were among institutionalized residents.

Figure 16-1: Hepatitis C in San Luis Obispo County
Community versus Institutional Residents, 1997-2011



Other key findings for hepatitis A and C include:

- Hepatitis A: Since 2006, the most frequently reported risk factor for hepatitis A was international travel. The greatest decrease in hepatitis A cases has been among children, due primarily to the 1999 recommendation for childhood vaccination. Between 1998 and 2010, San Luis Obispo County met the Healthy People 2010 objective of reducing new cases of hepatitis A to no more than 4.5 per 100,000. In 2011, San Luis Obispo County barely missed the HP 2020 goal of .3 cases per 100,000 (SLO rate was 0.37).
- Hepatitis C: In 2008, hepatitis C rates rose dramatically, with Intravenous Drug Use (IDU) as the most commonly identified risk factor for infection. Some, but not all of the high rate in 2008 was due to reporting of cases from prior years not yet recorded. Although San Luis Obispo County continues to report high numbers of chronically infected persons, there appear to be very few newly acquired infections occurring. From National data, the majority of persons infected today with hepatitis C were infected in the 1970s and 1980s.

Primary Prevention Activities:

Potential primary prevention activities include:

- Requiring hepatitis A virus (HAV) vaccination of children in areas with consistently higher levels of HAV infection.
- Promoting vaccination for hepatitis A in high-risk groups including adults traveling to foreign countries, persons in high-risk occupations and those with chronic liver disease.
- Promoting hepatitis B vaccination in children to help protect them when they reach high-risk ages or start to engage in high-risk behavior.
- Increasing levels of vaccine coverage of HBV for high-risk groups by vaccinating in drug treatment clinics, Sexually Transmitted Disease (STD) treatment clinics, correctional facilities and Human Immunodeficiency Virus (HIV) prevention sites.
- Educating adolescents and other high-risk groups of the dangers involved in sharing drug injecting needles and engaging in sexual relations without barrier type protection.
- Educating health care workers of potential risks they are exposed to and possible prevention methods.

Screening pregnant women for hepatitis B virus during an early prenatal visit is essential to identifying those who are infected. Women at high risk should be retested late in pregnancy. To be maximally effective, steps to prevent transmission of HBV to infants born to mothers who are infected must begin as soon as the child is born.

Data Sources:

Data sources for this report include:

- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/.
- Centers for Disease Control and Prevention, National Center for Infectious Diseases, Division of Viral Hepatitis. Data available from website: http://www.cdc.gov/ncidod/diseases/hepatitis/.
- California Department of Public Health, Center for Health Statistics, County Health Status Profiles; available at: http://www.cdph.ca.gov/programs/OHIR/Pages/default.aspx
- San Luis Obispo County Health Department, Automated Vital Statistics System, Confidential Morbidity Report data up until June 2011.
- San Luis Obispo County Health Department, CalREDIE, Confidential Morbidity Report data. (July 2011 forward).

Tuberculosis

Definition:

Tuberculosis is a serious disease caused by infection with the organism *Mycobacterium tuberculosis* and usually progresses to more severe outcomes among infants, adolescents, and immunosuppressed patients.

Importance:

According to the Department of Health and Human Services:

- Cases of tuberculosis increased by 20% between the years of 1985 and 1992. The trend toward eradication of tuberculosis was reversed due to the emergence of multi-drug resistant TB and the HIV/AIDS epidemic.
- Between the years of 1993 and 2010, new reported cases of tuberculosis continuously declined. The steepest decline occurred in 2009, with an 11.3% decrease in cases. In 2010, the rate decreased 3.1%.
- Patients who do not receive sufficient treatment for tuberculosis run a higher risk of becoming ill and contagious again, and the opportunity for development of new drug-resistant strains increases.

National Objective:

The Healthy People 2020 objectives for tuberculosis are:

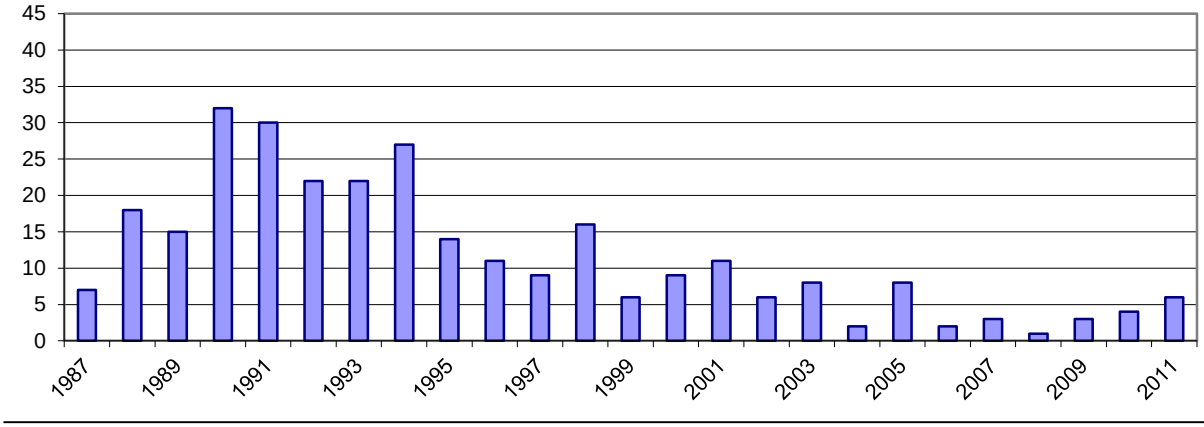
- Reduce new tuberculosis cases to 1 new case per 100,000 people.
- Increase the percentage of tuberculosis patients to finish curative therapy within 12 months from 83.8% in 2006 to 93% by 2020.
- Increase the percentage of contacts to smear-positive patients who are diagnosed with latent tuberculosis that complete a course of treatment to 79.9%.
- Increase the percentage of laboratories confirming and reporting positive tuberculosis tests within two days from 31% in 2008 to 75% in 2020.

Key Findings:

The key findings for tuberculosis include:

- The reported incidence of tuberculosis in San Luis Obispo County has been lower compared to the State of California from 1991 through 2011.
- Although California has consistently had higher rates than the United States since 1991, San Luis Obispo County's rates have been lower than the United States rates since 1995.
- In 2008 San Luis Obispo achieved the Healthy People 2020 objective of reducing new tuberculosis cases to 1 new case per 100,000 population; but the goal was not met in 2009, 2010 or 2011.

Figure 1: Tuberculosis Reported Cases
San Luis Obispo County, 1987 - 2011



Data source: California Department of Public Health, Report on Tuberculosis in California, 2002, January 2004, for 1985 through 2002 data. CDPH TB control Branch data tables for 2003-2011.

Primary Prevention Activities:

Primary prevention activities include:

- Targeted screening of those at increased risk of exposure or of likelihood of progressing to active TB disease, e.g., known contacts of a person with infectious TB disease, those who have recently immigrated from countries with high rates of TB, persons with HIV infection or other immunosuppressive conditions.
- Ensuring that those infected with TB receive the complete course of curative therapy to reduce the spread of the disease, or the chance that the infection will be reactivated in the patient at a later date.
- Increasing the percentage of those with latent tuberculosis who complete treatment so as to reduce the number of individuals progressing to active disease and thereby becoming capable of spreading it to others.
- Decreasing the amount of time that laboratories take to confirm and report positive tuberculosis tests by upgrading lab facilities, and properly training lab employees in new technology.

Data Sources:

Data sources for this report include:

- California Department of Health Services, Report on Tuberculosis in California, 2011; available at; http://www.cdph.ca.gov/DATA/STATISTICS/Pages/TuberculosisDiseaseData.aspx
- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/.
- American Public Health Association, Control of Communicable Diseases Manual, 2008, 19th edition, pages 639-658.

Pneumonia and Influenza

Importance:

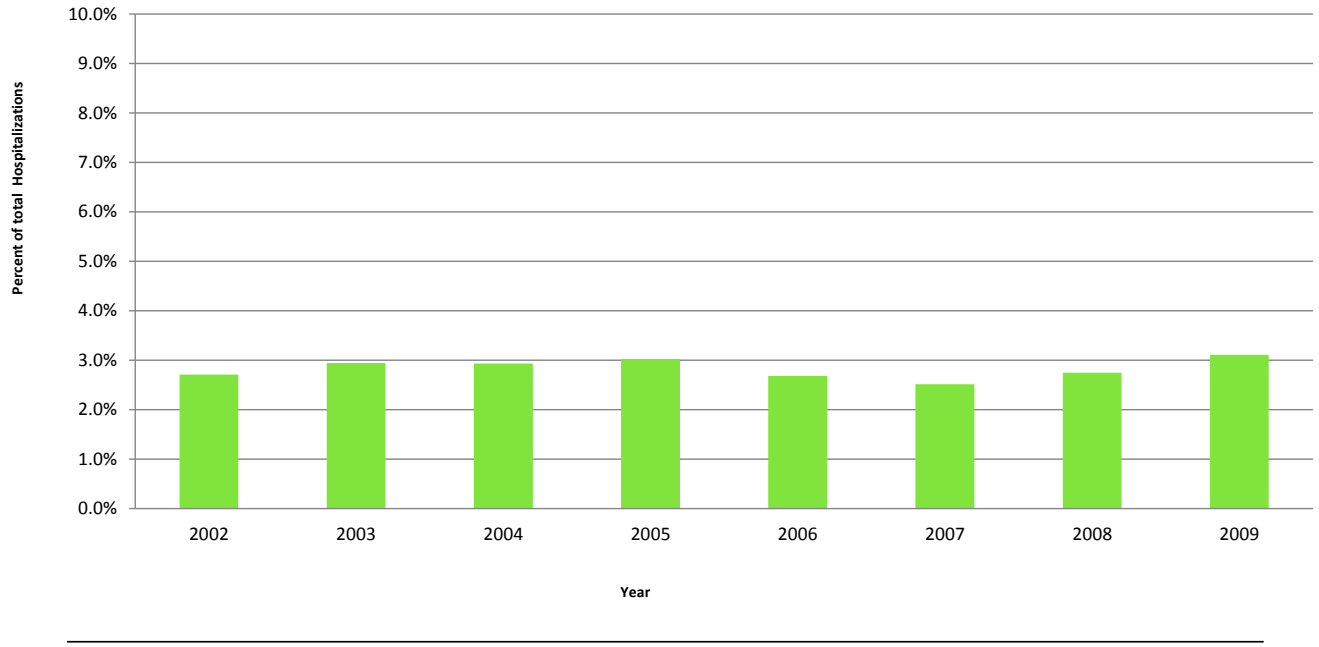
- Pneumonia and influenza (P & I) are important causes of morbidity and mortality in the United States, and together are the eighth leading cause of death in the US. There were an estimated 6,350 deaths in the California in 2009 due to pneumonia and influenza. It was the eighth leading cause of death in California between 2006-2008, down from sixth in 2008.
- It is estimated that during most influenza seasons, approximately 5% to 20% of the population is infected with influenza, although rates of infection vary among age groups and from one season to another.
- People considered at high risk for pneumonia and influenza include the elderly, the very young, and those with underlying health problems, such as chronic obstructive pulmonary disease (COPD), diabetes mellitus, and congestive heart failure. Individuals with diseases that impair the immune system, such as AIDS, or patients with chronic illnesses, such as asthma or those undergoing cancer therapy or organ transplantation, are particularly vulnerable. During the H1N1 pandemic, those younger than 65 years were at highest risk of becoming infected with flu, a change from a normal influenza season.

Key Findings

Pneumonia and Influenza Hospitalizations

- During 2006, 1.2 million hospital discharges were due to P & I in the US, with an average stay of 5.1 days. In 2009, in SLO County, 680 patients were admitted to San Luis Obispo County acute care hospitals with a principal diagnosis of influenza or pneumonia., out of 21,883 total admissions. The percentage of hospitalizations due to influenza or pneumonia is shown in Figure 18-1. The majority (97.5%) of these individuals were 18 years of age or older, while 2.5% were below the age of 18 years.

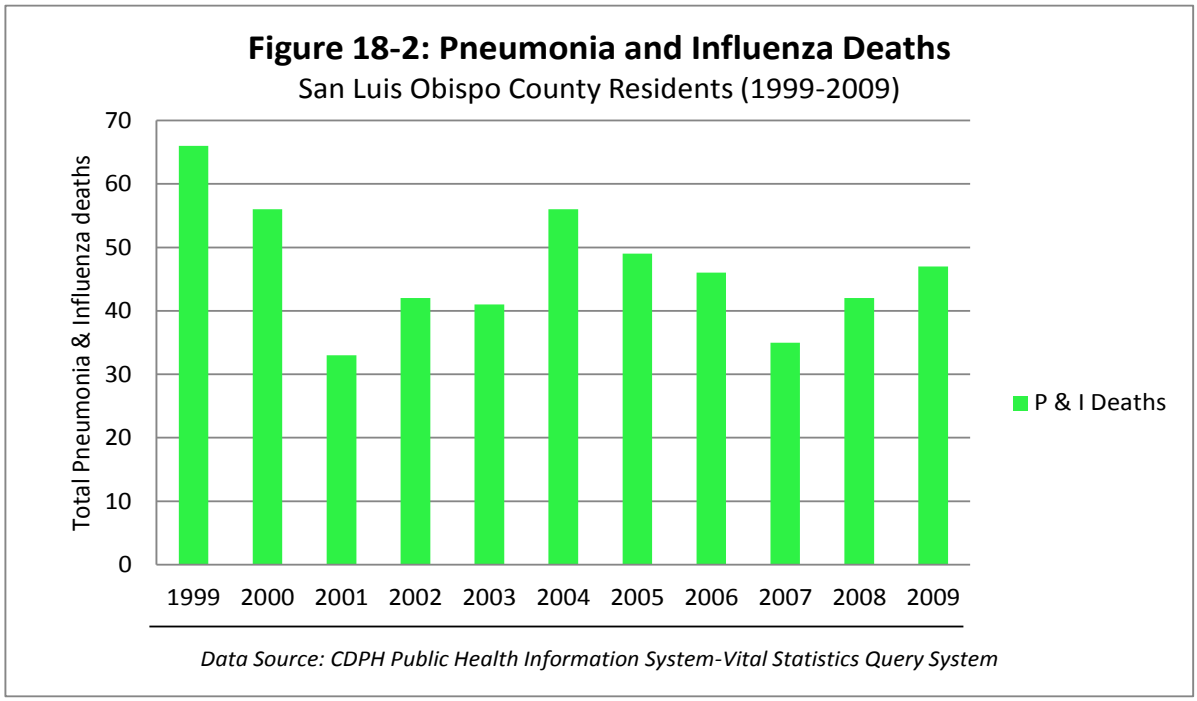
Figure 18-1: Pneumonia & Influenza Hospitalizations
Occurrence in San Luis Obispo County (2002-2009)



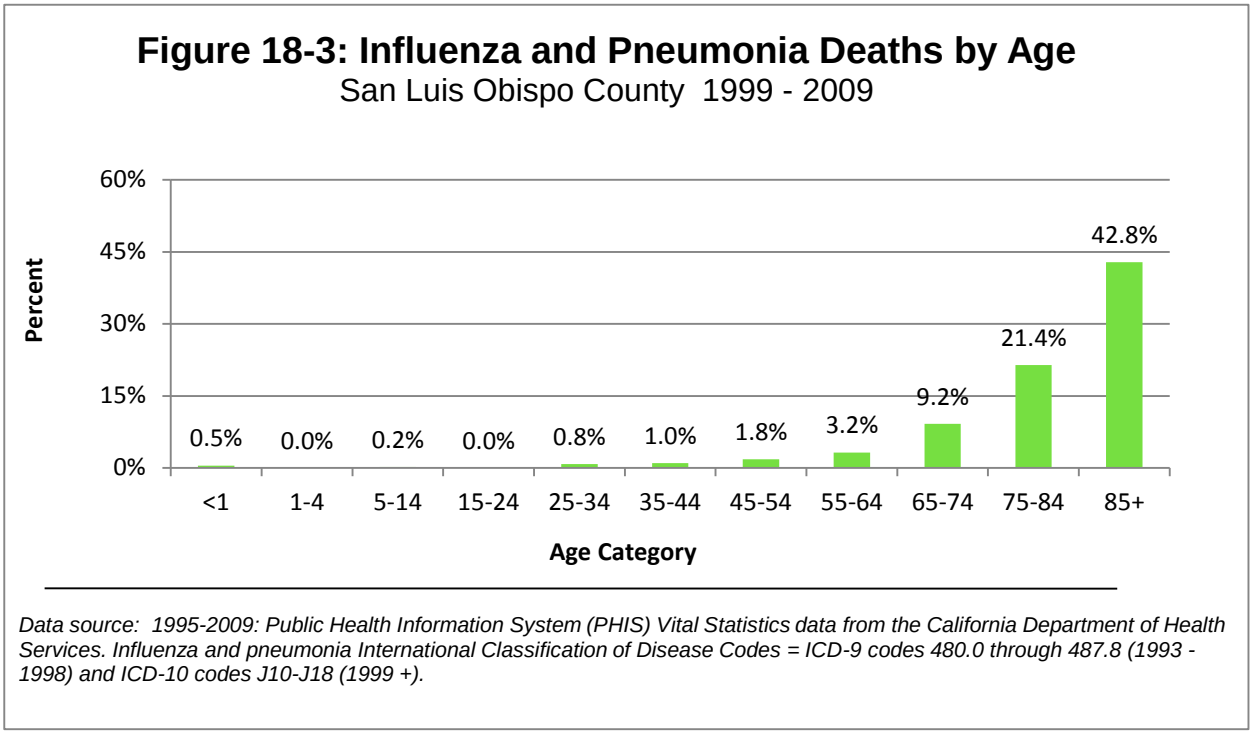
Note: These are total hospitalizations, not necessarily the total number of individuals hospitalized.

Pneumonia and Influenza Deaths

- During 1999-2009, an average of 46 deaths per year occurred in San Luis Obispo County with a primary cause of influenza or pneumonia. During this same time period, an average of 2,053 deaths due to all causes occurred per year; therefore, 2.2% of all deaths were attributed to influenza or pneumonia. The actual number of deaths from influenza or pneumonia per year ranged from 33 to 66, as shown in Figure 18-2.



- Between 1999-2009, the majority of the individuals who died of pneumonia or influenza in San Luis Obispo County were 65 years of age or older (~91%), while ~3.1% were between the ages of 45 and 64. The percentage below the age of 5 years was 0.6%. The mortality by age group is shown in Figure 18-3.



National Objectives:

Healthy People 2020 objectives:

- Increase the proportion of adults who are vaccinated annually against influenza and ever vaccinated against pneumococcal disease to:
  - 90% for institutionalized adults (persons in long-term or nursing homes)
  - 90% for noninstitutionalized adults aged 65 years and older
  - 60% for pneumococcal disease and 90% for influenza for noninstitutionalized high-risk adults aged 18-64 years

We do not have data to show how San Luis Obispo county is performing, in relation to these national objectives.

Primary Prevention Activities:

Per the Centers for Disease Control and Prevention:
Influenza vaccination is the primary method for preventing influenza and its severe complications. As indicated in this report from the Advisory Committee on Immunization Practices (ACIP), annual influenza vaccination is now recommended for all persons 6 months and older.

Physicians and other healthcare workers who notice an unexpected increase in patients with influenza-like symptoms or pneumonia should report the increase to the Public Health Department.

Data Sources:

Data sources for this report include:

- Centers for Disease Control and Prevention www.cdc.gov
- American Lung Association www.lungusa.org
- California Department of Public Health, Center for Health Statistics: Public Health Information System, Vital Statistics Data. http://www.cdph.ca.gov/data/statistics/Pages/DeathStatisticalDataTables.aspx
- California Office of Statewide Health Planning and Development, Hospital Discharge Data. http://www.oshpd.ca.gov/HID/DataFlow/HospMain.html
- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science.

Leading Causes of Death

Overview:

The leading causes of death changed during the 20th century from infectious to chronic diseases. According to the American Public Health Association, in 1900: pneumonia and influenza, tuberculosis, and gastroenteritis and colitis were the three leading causes of death, accounting for nearly a third of all deaths. Today, heart disease, malignant neoplasms (cancer), and cerebrovascular diseases (strokes) are the three leading causes of death, accounting for almost two-thirds of all deaths.

The 2009 leading causes of death among San Luis Obispo County residents are shown in Table 19-1. A little over half, or 54.8% of the 2009 deaths were due to the three leading causes: heart diseases, cancer, and strokes.

Table 19-1:
Leading Causes of Death for San Luis Obispo County Residents,
Number and Percent of Deaths per Year (2009)

Diagnostic Category	All Residents	
	N	Percent
Malignant neoplasms (cancer)	506	24.4%
Diseases of the heart	450	21.7%
Cerebrovascular disease (stroke)	182	8.8%
Chronic lower respiratory diseases	125	6.0%
Accidents	94	4.5%
Dementia/Alzheimer's disease	84	4.0%
Pneumonia and influenza	47	2.3%
Diabetes mellitus	45	2.2%
Suicide	45	2.2%
Chronic liver disease / cirrhosis	37	1.8%
All other causes of death	460	22.2%
Total	**2,075**	**100%**

Data Source: California Department of Public Health, Center for Health Statistics, Public Health Information System.

Leading Causes of Death:

As shown in Table 19-2, the leading causes of death (LCOD) for residents between 2005 and 2009 was similar to the State as a whole, although small numbers caused some categories to vary somewhat. Counts are not included for

California deaths by category.

Table 19-2 Comparison of leading causes of death, by year 2005-2009						
Cause of Death rank	California LCOD All Years	2005	2006	2007	2008	2009
#1	Heart Disease	Heart Disease	Heart Disease	Heart Disease	Cancer	Cancer
Count	-	524	580	634	519	506
#2	Cancer	Cancer	Cancer	Cancer	Heart Disease	Heart Disease
Count	-	496	488	498	513	450
#3	Cerebro Vascular Disease	Cerebro Vascular Disease	Cerebro Vascular Disease	Cerebro Vascular Disease	Cerebro Vascular Disease	Cerebro Vascular Disease
Count	-	180	160	165	166	182
#4	Chronic Lower Respiratory Disease	Accidents	Chronic Lower Respiratory Disease	Accidents	Chronic Lower Respiratory Disease	Chronic Lower Respiratory Disease
Count	-	119	120	116	138	125
#5	Accidents	Chronic Lower Respiratory Disease	Accidents	Chronic Lower Respiratory Disease	Accidents	Accidents
Count	-	117	105	95	97	94
#6	Alzheimer's	Alzheimer's	Alzheimer's	Alzheimer's	Alzheimer's	Alzheimer's
Count	-	63	48	50	65	84
#7	Diabetes	Diabetes	Influenza / Pneumonia	Suicide	Influenza / Pneumonia	Influenza / Pneumonia
Count	-	61	46	47	42	47
#8	Influenza / Pneumonia	Influenza / Pneumonia	Diabetes	Diabetes	Liver Disease	Diabetes
Count	-	47	33	36	39	45
#9	Liver Disease	Suicide	Suicide	Influenza / Pneumonia	Diabetes	Suicide
Count	-	36	26	35	34	45
#10	Suicide	Liver Disease	Liver Disease	Liver Disease	Suicide	Liver Disease
Count	-	15	25	26	31	37
All Other Causes-Count	-	431	472	503	450	460
Total Deaths	-	2,089	2,103	2,105	2,094	2,075

Deaths due to unintentional injuries

As seen in Table 19-3, deaths to San Luis Obispo County residents due to accidents has been broken down further to reflect the nature of the accidental death. Not all deaths are categorized, as many categories included only one death. However, the majority of deaths due to injury are shown in the table by year. The three leading causes of unintentional deaths due to injuries are transportation accidents, (including motor vehicle related accidents), accidental poisonings, and falls. These three categories accounted for 81% of accidental deaths in 2009. Poisoning by drugs accounted for the majority of the category Accidental Poisonings in 2007 & 2008, but dropped dramatically in 2009 for unknown reasons. San Luis Obispo

County met the HP 2020 objective of no more than 36.0 deaths per 100,000 due to unintentional injury deaths.

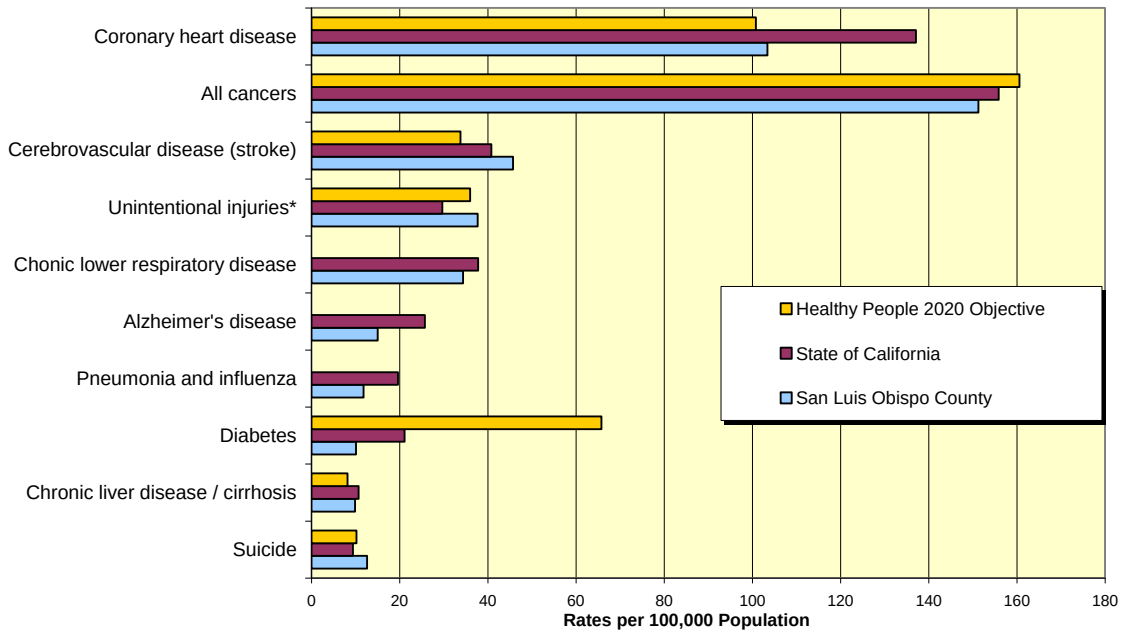
Table 19-3:
Unintentional deaths due to injury : 2007-2009

		Year	
	2009 (n=94)	**2008 (n=136)**	**2007 (n=174)**
Cause	**Count**		
Transport including MVAs	35	25	39
Accidental Poisoning and exposure to noxious substances	29	26	31
---Accidental Poisoning by drugs[i]	8	22	27
Fall	17	30	20
Accidental Drowning	4	4	4
Respiratory Obstruction	4	2	4
Complications of medical/surgical care	3	2	2
Neglect	1	1	1
Accidental discharge of firearm	1	1	0
Accidental Electrocution	0	0	1
Exposure to smoke, fire and flames	0	0	1

[i] A subset of Accidental Poisonings.

Death Rates: The California leading causes of death are shown in Table 19-2, with a comparison of California and San Luis Obispo County rates. The age-adjusted death rate is shown. Age adjusting the death rates allows for comparing to larger populations if all populations had the same percentage of persons by age breakdown. If one only looks at crude death rates, then San Luis Obispo County has a higher mortality rate (compared to California) for most health status indicators, as one would expect due to our higher percentage of elderly residents. An age-adjusted rate is the hypothetical rate that a group (e.g., our county) would have if its population were distributed in the same proportions as the 2000 United States population.

Figure 19-2 Age-Adjusted Death Rates (2006-2008)
San Luis Obispo, California, and Healthy People 2020



Data Sources: California and San Luis Obispo County data from California Department of Health Services, Center for Health Statistics, Cal Health Status 2010. Healthy People 2020 Objectives were not established for chronic lower respiratory disease, Alzheimer's disease, and Pneumonia and influenza.
** Unintentional injuries are considered to be those from motor vehicle accidents, poisonings (including accidental drug or alcohol overdoses), falls, pedal cycle accidents, fires, near-drownings, unintended firearm related injuries, and other causes.*

National Objectives:

The Healthy People 2020 objectives for causes of death are summarized below. There is no objective for pneumonia and influenza deaths, chronic lower respiratory disease deaths (other than chronic obstructive pulmonary disease or asthma by age categories), chronic liver disease deaths (other than to reduce cirrhosis deaths to 8.2 per 100,000 population), or Alzheimer's disease deaths.

- Reduce coronary heart disease deaths to 100.8 per 100,000 population
- Reduce overall cancer deaths to 160.6 per 100,000 population
  - Reduce lung cancer deaths to 45.5 per 100,000 population
  - Reduce breast cancer deaths to 20.6 per 100,000 population
- Reduce cerebrovascular disease deaths to 33.8 per 100,000 population
- Reduce unintentional injury deaths to 36.0 per 100,000 population
- Reduce diabetes death rate to 65.8 per 100,000 population
- Reduce suicide deaths to 10.2 per 100,000 population

Summary:

- The San Luis Obispo County 2006-2008 average age-adjusted death rate of 628.0 per 100,000 for all causes of death was lower than the rate for the State of California (666.4).
- The San Luis Obispo County 2006-2008 average age-adjusted death rates for the top two causes of death (cancer, coronary heart disease) were lower compared to the State of California, and met the Healthy People 2020 objectives.
- The San Luis Obispo County 2006-2008 age-adjusted death rates for chronic lower respiratory disease, pneumonia and influenza, diabetes, Alzheimer's and chronic liver disease / cirrhosis were lower compared to the State of California.
- The 2006-2008 age-adjusted mortality rates due to unintentional injuries and suicides among San Luis Obispo County residents were higher than those of the State of California.

Data Sources:

Data sources for this report include:

- California Department of Public Health, Center for Health Statistics: (a) Public Health Information System, (b) County Health Status Profiles 2007 and (c) other CDPH reports specified in Table 19-2. http://www.cdph.ca.gov/programs/OHIR/Pages/default.
- Healthy People 2020 Objectives, U.S. Dept. of Health and Human Services, Office of Public Health and Science.
- California EpiCenter –California Injury Data Online - http://epicenter.cdph.ca.gov/ReportMenus/DataSummaries.aspx

Chronic Diseases

Definition:

According to the American Public Health Association, chronic diseases can be defined as those that have a prolonged course of illness, that do not resolve spontaneously, and for which a complete cure is rarely achieved. They are generally characterized by uncertain etiology (cause), multiple risk factors, and functional impairment or disability. Per the CDC, chronic diseases such as heart disease, stroke, cancer, diabetes and arthritis are among the most common, costly, and preventable problems in the United States.

- **Cardiovascular disease** (CVD) refers to a wide variety of blood vessel diseases, including coronary heart disease, hypertension (high blood pressure), cerebrovascular disease (stroke), and rheumatic heart disease. Coronary heart disease, or coronary artery disease, is a term used to identify several disorders that reduce the blood supply to the heart muscle. This is most frequently the result of narrowing of the coronary arteries by atherosclerosis. The most common manifestations of coronary heart disease are angina pectoris (chest pain), myocardial infarction (heart attack), and sudden death.
- **Cancer** refers to many different types of diseases characterized by un-controlled growth and spread of abnormal cells. The principal danger of a cancer is its tendency to metastasize, or invade neighboring tissues or organs, and to grow in other areas of the body. If this spread remains untreated, cancer cells invade vital organs or cause dysfunction by displacing normal tissue.
- **Chronic lung disease** refers to a diverse group of disorders with varying symptoms, diagnostic criteria, and causative factors. Most of the disorders are accompanied by impairment in lung function. A relatively common diagnosis is "chronic obstructive pulmonary disease", which includes patients with chronic bronchitis, emphysema, and a subset of patients with asthma.
- **Diabetes** refers to a disease in which the body is unable to sufficiently produce and/or properly use insulin, a hormone needed to convert glucose into energy. If glucose levels are too high, the patient will develop a condition called ketoacidosis, which is fatal without treatment. Genetics, obesity and lack of exercise all appear to play a role in the development of diabetes.
- **Obesity** refers a range of weight that is considered greater than is what is healthy. Overweight is defined as a Body Mass Index (BMI) greater than 25, while obese is defined as a BMI greater than or equal to 30. Obesity is covered in more depth in Section 22.
- **Arthritis and Other Musculoskeletal Diseases** refer to more than 100 diseases. However, two of these disorders make up the vast majority of disability and economic costs: (1) **osteoarthritis**, also known as degenerative joint disease, and (2) **osteoporosis**, a bone disorder in which the reduction of bone tissue occurs to the extent that fractures occur with minimal or trivial trauma. Other conditions include rheumatoid arthritis (an autoimmune disease involving chronic inflammation that begins in the joints) and gout (a metabolic disease characterized by recurrent attacks of acute arthritis, an increase in serum uric acid concentration, and deposition of crystals in and

around joints).

Importance: According to the Centers for Disease Control and Prevention:

- **Heart disease, cancer, and cerebrovascular diseases (stroke)** account for more than 50% of all deaths.
- **7 out of 10 deaths among Americans** each year are from chronic diseases.
- **Chronic Obstructive Pulmonary Disease (COPD)** occurs most often in older people, and is the third leading cause of death in the US. More than 12 million people are currently diagnosed with COPD. Between 80 and 90 percent of COPD is attributable to cigarette smoking.
- **Asthma** is a serious and growing health problem. An estimated 3.7 million adults and 1.7 million children in California have been diagnosed with asthma at one point in their lives. Asthma was responsible for about 150,000 ER visits, 36,000 hospitalizations, 500 deaths, and approximately $770 million in hospitalization costs alone in California in 2007. Approximately 18.7 non-institutionalized adults(8.2% of all adults) in the US currently have asthma, and another 7.0 million children (9.4% of all children) have been diagnosed as well. Further data on Asthma is included in a later section.
- **Diabetes** prevalence has increased steadily over the past decade; by 2010, 18.8 million persons in the US had been diagnosed with diabetes, and an additional 7.0 million had undiagnosed diabetes. This represents 8.3% of the population. The CDC estimates that in 2008, 6.0% of adults (age-adjusted rate) in San Luis Obispo County have diagnosed diabetes. Over the past decade, diabetes has remained the seventh leading cause of death in the United States, primarily from diabetes-associated cardiovascular disease. In the United States, diabetes is the leading cause of non-traumatic amputations, blindness among adults aged 20-74; and end-stage renal disease (ESRD). In 2007, total direct and indirect costs for diabetes in the US was $174 billion.
- **Arthritis** is the leading cause of disability in the US. Overall, 22% (50 million) of adults reported arthritis in the 2007-2009 National Health Interview Survey. Women have significantly higher age-adjusted rates than men (24.3% vs. 18.3%)
- **Osteoporosis:** Per the U.S. Department of Health and Human Services, about 13 to 18 percent of women aged 50 years and older and 3 to 6 percent of men aged 50 years and older have osteoporosis, a reduction in bone mass or density that leads to deteriorated and fragile bones. The major health consequence of osteoporosis is an increased risk of fractures. Approximately 1.5 million fractures per year are attributed to osteoporosis. By 2020, one in two Americans over age 50 is expected to have or be at risk of developing osteoporosis of the hip. Annual direct care expenditures for osteoporotic fractures are estimated at $12 to $18 billion per year in 2002 dollars.

National Objectives: Healthy People 2020 objectives related to chronic disease deaths are summarized in the Leading Causes of Death chapter.

Key Findings: Consistent with the State of California and the United States, chronic disease illnesses and deaths are a major health care issue for San Luis Obispo County.

- In the Leading Causes of Death chapter, our county age-adjusted death rates were lower among San Luis Obispo County residents compared to that of Californians.
- As shown in Table 20-2, compared to California, San Luis Obispo County had a slightly higher percentage of the population reporting ever having been diagnosed with heart disease.

Table 20-2: Percentage of persons with Heart Disease
San Luis Obispo County and California, 2009

Geographic Region	Ever Diagnosed with Heart Disease	95% Confidence Interval
San Luis Obispo County	**6.8%**	4.1-9.6
California	**5.9%**	5.5-6.3

Data Source: 2009 California Health Interview Survey

- As shown in Table 20-3, San Luis Obispo County had a lower percentage of persons ever diagnosed with diabetes compared to that of California. Only five counties and one region have significantly lower rates than the state, and SLO County is one of them according to the California Diabetes Program report "Diabetes in California Counties, issued 2009"
- The prevalence of diabetes among men (5.0 per 100) was slightly higher than women (4.3 per 100), while the prevalence among African Americans (12.1 per 100) was much higher than for whites (5.0 per 100) and Latinos (3.1 per 100).

Table 20-3: Percentage of persons with Diabetes*
San Luis Obispo County and California, 2009

Geographic Region	Ever Diagnosed with Diabetes	95% Confidence Interval
San Luis Obispo County	**5.0**	2.9- 7.0
California	**8.5**	7.8 – 9.1

*Data Source: University of California at Los Angeles Center for Health Policy Research and State of California, California Health Interview Survey 2009, UCLA Center for Health Policy Research

- As shown in Table 20-4, San Luis Obispo County had a higher percentage of persons reporting diagnosis with arthritis in 2005 compared to others in California. The question was not repeated in later CHIS surveys.

- In California, 30% of those aged 45-64 have arthritis, while 47% of persons aged 65-74 have arthritis, and 53% of those 75 and older have arthritis.

Table 20-4: Percentage of persons with Arthritis
San Luis Obispo County and California, 2005

Geographic Region	Ever Diagnosed with Arthritis, Gout, Lupus or Fibromyalgia	95% Confidence Interval
San Luis Obispo County	**27.3**	22.4 – 32.2
California	**19.0**	18.5 – 19.5

[Data Source: University of California at Los Angeles Center for Health Policy Research and State of California, California Health Interview Survey 2005, UCLA Center for Health Policy Research]

Cost Analysis: The costs of chronic diseases are enormous, not only in the illnesses, deaths, and economic losses, but also in the negative impact that chronic diseases may have on the quality of life of individuals and their families and friends. Individuals suffering from chronic disease may experience chronic pain, dysfunction and disability, depression, economic hardship, social isolation, and increased risk of life-threatening events. The Institute for Health and Aging, has estimated the number of persons with chronic conditions and their corresponding direct medical costs as follows:

- In 2000, 105 million persons affected; $503 billion cost estimate
- In 2050, 167 million persons affected; $906 billion cost estimate

Primary Prevention Activities: The goals of chronic disease control are to reduce disease incidence, prevent or delay disability onset, reduce the severity of the disease, and prolong the individual's life.

Data Sources:

- American Public Health Association, Chronic Disease Epidemiology Control, 1993.
- UCLA Center for Health Policy Research, 2005, 2007, 2009 California Health Interview Survey; AskCHIS Query, http://www.chis.ucla.edu
- The Institute for Health and Aging, UCSF: Chronic care in America: a 21st century challenge, Princeton, NJ, 1996, The Robert Wood Johnson Foundation, p. 9; Cost estimates based on the 1987 National Medical Expenditure Survey, UCSF-Institute for Health and Aging, 1995.
- California Department of Public Health, Center for Health Statistics.
- Centers for Disease Control and Prevention: National Diabetes Surveillance System.
- California Arthritis Partnership Program, www.cdph.ca.gov/programs/CAPP

Tobacco Use

Definitions:

About 443,000 people die prematurely from smoking or secondhand smoke exposure in the United States each year. In 2010, from data in the Behavioral Risk Factor Surveillance System, the CDC estimated that 17.3% of adults in the U.S. were current cigarette smokers, while 12.1% of adults in California were smokers. Since 1964, Surgeon General reports on smoking and health have concluded that tobacco use is the single most avoidable cause of disease, disability and death in the United States. Smokers are not the only party at risk; the persons near by also inhale the toxic smoke—this situation is often called "secondhand smoke."

People at risk include those who engage in smoking cigarettes as well as those who inhale the carcinogenic and toxic smoke, also known as secondhand smokers. Other people at risk include people who partake in certain activities or who have certain characteristics that increase their potential for contracting an illness, injury, or health problem after exposure to cigarette smoke.

Risk factors are derived by contrasting the frequency of a disease or health condition in persons *exposed* to a specific trait or risk factor with the frequency in another group *not exposed* to the same risk factor. Risk factors are generally in one of three major categories: (1) behavioral or lifestyle patterns; (2) environmental factors; and (3) inborn or inherited characteristics.

Health behaviors include lifestyle patterns such as smoking, sedentary lifestyle, alcohol and other drug use that are associated with an increased risk or chance for developing chronic diseases.

Importance:

Tobacco use combined with high blood pressure and poor nutrition is believed to account for approximately 73% of premature deaths in the United States.

According to the United States' Preventive Services Task Force (Department of Health and Human Services, 2010):

- Smoking alone contributes to one out of every five deaths in the United States.
- Complications from secondhand smoke include:
  - Heart disease
  - Lung cancer
  - Sudden infant death syndrome (SIDS)
  - Acute respiratory infections
  - Ear problems
  - More frequent attacks of asthma in children
- Complications from tobacco use include:
  - Ten fold increase in the risk of dying from Chronic Obstructive Pulmonary Disease (COPD)
  - Cigarette smoking has many adverse reproductive and early childhood effects, including an increased risk for infertility, preterm delivery, stillbirth, low birth weight, and sudden infant death syndrome (SIDS).

- Postmenopausal women who smoke have lower bone density than women who never smoked. Women who smoke have an increased risk for hip fracture than lifetime non-smokers.

National Objectives:

The Healthy People 2020 objective is to reduce the prevalence of cigarette smoking among adults aged 18 and older to 12%.

Examples of several chronic diseases and associated risk factors are provided in Table 21-1.

Table 21-2C: Tobacco Use

Healthy People 2020 Leading Health Indicators

National Objective	National Baseline Results	San Luis Obispo County Results
Reduce tobacco use (cigarettes) by adults to **12 percent**. *Source: Healthy People 2020*	**17.3%** of adults aged 18 years and older smoked cigarettes in 2010 (age adjusted to the year 2000 standard population) **12.1%** of adults in California smoked cigarettes in 2010. *Data source: Behavioral Risk Factor Surveillance System(BRFSS), CDC, NCHS 2010*	**13.1% percent** of residents smoked cigarettes every day or some days, an increase from 11.7% in 2006. *Data source: Action for Healthy Communities, 2006 & 2010* **10.2 percent** of adults indicated they were current smokers in 2009, down from 14 percent of adults in 2007. *Data source: 2007 & 2009 California Health Interview Survey (CHIS), UCLA Center for Health Policy Research*
Reduce tobacco use (cigarettes) by students (in Grades 9 through 12) within the last 30 days to **16 percent**. *Source: Healthy People 2020*	**19.5** percent of adolescents (in Grades 9 through 12) used cigarettes in past 30 days. 7.3 percent of adolescents smoked cigarettes on 20 or more days in past 30 days 9.1 percent of adolescents used chewing tobacco, snuff or dip on at least once in past 30 days *Data source: Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP 2009*	**30.6 percent** of teens in San Luis Obispo County reported using 1 cigarette or less in the past 30 days, with **61.3 percent** of teens reporting no cigarette smoking (Statistically unstable result). *Data source: 2009 California Health Interview Survey (CHIS), UCLA Center for Health Policy Research.* The percentage of students who smoked one or more cigarettes in the past 30 days in 08/09 and 09/10 was: **- 5 percent** in Grade 7 **- 12 percent** in Grade 9 **- 16 percent** in Grade 11 *Data source: California Healthy Kids Survey, 2008-2010*

Data Sources:

Data sources for this report include:

- Centers for Disease Control and Prevention; At a Glance. *Targeting Tobacco Use, the Nations Leading Cause of Preventable Death*. 2009. http://www.cdc.gov/tobacco/basic_information/00_pdfs/AAGTobacco2

007.pdf

- American Public Health Assoc., Chronic Disease Epidemiological Control, 1993.
- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/.
- National baseline results (survey data) from *National Health Interview Survey*, *National Health and Nutrition Examination Survey*, *Food Security Supplement to the Current Population Survey, National Household Survey on Drug Abuse, and Youth Risk Behavior Surveillance System* were all obtained from Healthy People 2010, U.S. Department of Health and Human Services, Office of Public Health and Science.
- UCLA Center for Health Policy Research, California Health Interview Survey; AskCHIS Query, http://www.chis.ucla.edu
- Ponce NA, Babey SH, Etzioni DA, Spencer BA, Brown ER, and Chawla N. *Cancer Screening in California: Findings from the 2001 California Health Interview Survey*: Los Angeles: UCLA Center for Health Policy Research, 2003.
- Centers for Disease control and Prevention, MMWR 58(44); 1232-1235. November 13, 2009
- California Health Kids Survey, Technical Report, Secondary 2008-2010
- Action for Health Communities, *Community Assessment Report 2010*

Obesity and Physical Inactivity

Definitions:

Overweight and obesity are labels for weight ranges that are greater than what is generally considered healthy for a given height. For adults, overweight and obesity are determined by using weight and height to calculate Body Mass Index (BMI). BMI does not measure body fat directly, but research has shown that BMI correlates to direct measures of body fat, such as underwater weighing.

Physical activity is the measure of how hard your body is working, and is categorized as light, moderate or vigorous, based on the amount of energy or effort a person expends in performing the activity.

Importance:

There has been a dramatic increase in obesity in the United States in the past 20 years. More than one-third of U.S. adults – (35.7%) – were obese in 2009-2010. In California, 24% of adults are considered obese. California ranked 5th out of all states for lowest percentage of obese adults (4 States had lower percentages of obese adults).

People who are obese are at increased risk for heart disease, high blood pressure, type 2 diabetes, arthritis-related disabilities, some cancers, sleep disorders, depression, and other mental health disorders. The medical costs associated with obesity were projected by the CDC to have risen to $147 billion in 2008. A ten percent improvement in the number of people becoming more active and maintaining a healthy weight over a five year period could result in savings of nearly $13 billion.

Regular physical activity can improve health, and reduce the incidence of obesity and risk of premature death from cardiovascular disease, stroke, and heart attacks. Regular physical activity can also lower the risk of developing high blood cholesterol, developing high blood pressure, developing type 2 diabetes, developing colon cancer, and developing feelings of depression and anxiety.

People at risk

BMI can be considered an alternative for direct measures of body fat. Additionally, BMI is an inexpensive and easy-to-perform method of screening for weight categories that may lead to health problems. The formula is as follows:

$$BMI = \text{weight (kg)} / [\text{height (m)}]^2$$

For adults 20 years and older, BMI is interpreted using standard weight status categories that are the same for all ages and for both men and women.

BMI	Weight Status
Below 18.5	Underweight
18.5 – 24.9	Normal
25.0 – 29.9	Overweight
30.0 and Above	Obese

For children and teens, on the other hand, the interpretation of BMI is both age- and sex-specific. It is based on how the child/teen's BMI compares to the 2000 CDC growth chart.

Weight Status Category	Percentile Range
Underweight	Less than the 5th percentile
Healthy weight	5th percentile to less than the 85th percentile
At risk of overweight	85th to less than the 95th percentile
Overweight	Equal to or greater than the 95th percentile

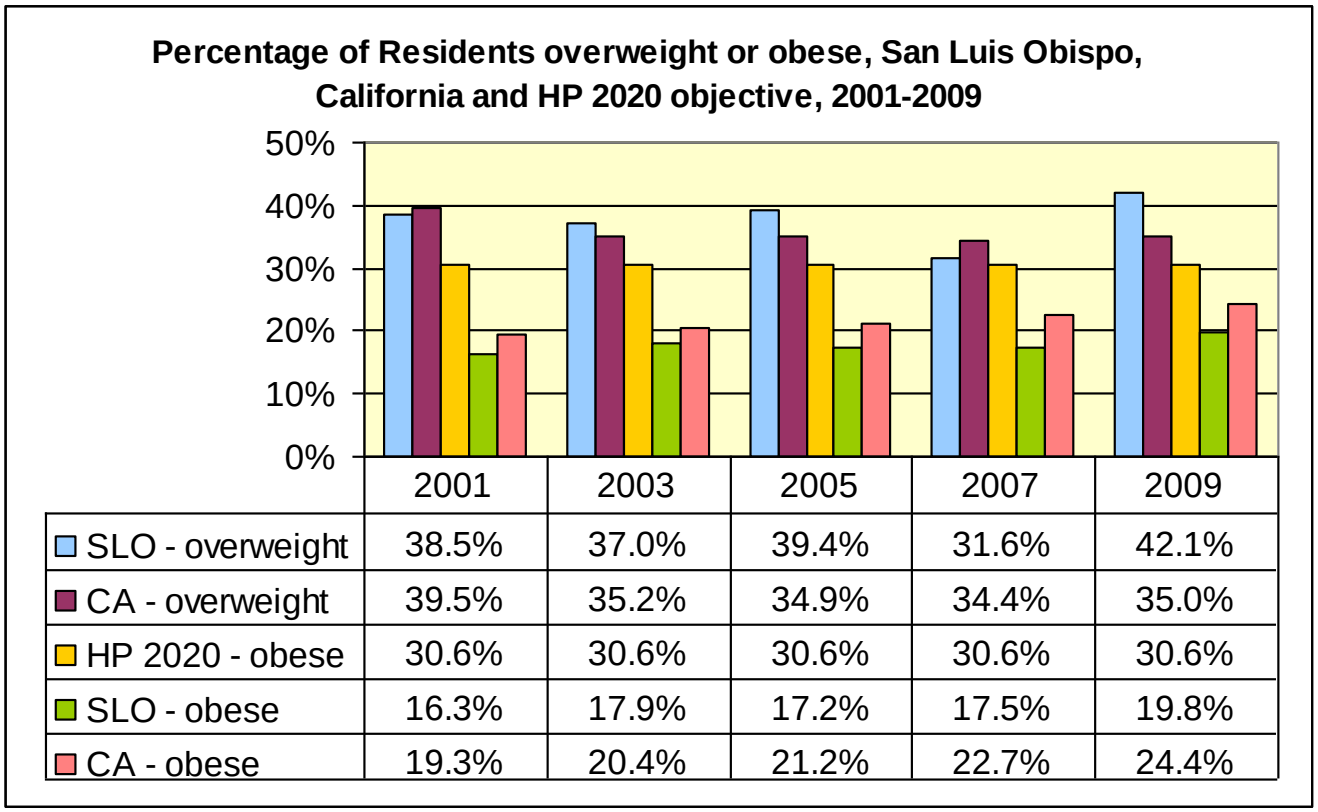
National Objectives:

The Healthy People national objectives for 2020 include:

- Increase the proportion of adults who are at a healthy weight to 33.9%.
- Reduce the proportion of adults are are obese to 30.6%
- Reduce the proportion of children and adolescents (aged 2 to 19 years) who are overweight or obese to 14.6%.
- Reduce the proportion of adults who engage in no leisure-time physical activity to 32.6%.
- Increase the proportion of adolescents who meet current Federal physical activity guidelines for aerobic physical activity to 20.1%.
- Increase the proportion of the Nation's public and private schools that require daily physical education to:
  - 4.2% for elementary students.
  - 8.6% for middle and junior high students.
  - 2.3% for senior high students.

Key Findings:

While no state met the Healthy People 2010 obesity target of 15% in 2009, many states, including California, currently meet the new Healthy People 2020 target of reducing the proportion of adults who are obese to 30.6%. According to the 2009 California Health Interview Survey (CHIS), an estimated 24.4% of adults in California are classified as obese, while 19.8% of San Luis Obispo County residents are. Another 42.1% of SLO County residents are overweight, while 35% of Californians overall are overweight.



	2001	2003	2005	2007	2009
SLO - overweight	38.5%	37.0%	39.4%	31.6%	42.1%
CA - overweight	39.5%	35.2%	34.9%	34.4%	35.0%
HP 2020 - obese	30.6%	30.6%	30.6%	30.6%	30.6%
SLO - obese	16.3%	17.9%	17.2%	17.5%	19.8%
CA - obese	19.3%	20.4%	21.2%	22.7%	24.4%

Source: UCLA Center for Health Policy Research, California Health Interview Survey 2001-2009

According to the 2009 CHIS, 21.1% of San Luis Obispo County teenagers (age 12-17) were deemed at risk of being overweight compared to 16.7% across the entire State. 12.1% of San Luis Obispo County teens are obese, compared to 12.0% of teens across California. Neither San Luis Obispo County nor California is meeting the HP 2020 objectives. (Note: SLO County teenage data is statistically unstable).

Between 1999 and 2010, the percentage of persons reporting engaging in some form of regular physical exercise at least three days a week increased from 72.8% to 77%. During the same period, the percentage of people taking part in some form of exercise 1-2 days a week also increased from 13.1% to 16.2%. (Data Source: *ACTION for Health Communities 2010)*

Primary Prevention Activities:

Promoting regular physical activity and healthy eating and creating an environment that supports these behaviors are essential to addressing the problem.

Data Sources:

Data sources for this report include:

- Mei Z, Grummer-Strawn LM, Pietrobelli A, Goulding A, Goran MI, Dietz WH. Validity of body mass index compared with other body-composition screening indexes for the assessment of body fatness in children and adolescents. *American Journal of Clinical Nutrition* 2002; 7597–985.
- Centers for Disease Control and Prevention; National Center for Chronic Disease Prevention and Health Promotion; available at: http://www.cdc.gov/nccdphp/dnpa/bmi/

- California Department of Public Health. Public Health Institute. *The Economic Costs of Physical Inactivity, Obesity, and Overweight in California Adults: Health Care, Workers' Compensation and Lost Productivity.* 2005
- California Department of Public Health. *California Obesity Prevention Plan: A vision for tomorrow, strategic actions for today.*
- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/.
- UCLA Center for Health Policy Research, 2009 California Health Interview Survey; AskCHIS Query, http://www.chis.ucla.edu
- Action for Health Communities, *Community Assessment Report 2010*

Unintentional Injury Hospitalizations and Deaths

Definition:

Unintentional Injury Hospitalizations: the rate per 100,000 persons of hospitalizations due to unintentional injuries.

Unintentional Injury Deaths: the age-adjusted rate of deaths due to unintentional injuries per 100,000 persons.

Unintentional injuries are considered to be those from motor vehicle accidents, poisonings, falls, pedal cycle accidents, fires, near-drownings, unintended firearm related injuries, and other causes. Not included are self-inflicted injuries, which are addressed in a separate report. Also not included are intentional injuries or homicides due to assaults, which are also addressed in a separate report.

Importance:

Per the Centers for Disease Control and Prevention and the Department of Health and Human Services:

- Unintentional injury is the leading cause of death for Americans ages 1 to 44.
- More than 400 Americans die each day from injuries due primarily to motor vehicle crashes, firearms, poisonings, suffocation, falls, fires, and drowning. The risk of injury is so great that most persons sustain a significant injury at some time during their lives.
- Motor vehicle crashes are the leading cause of death among children ages 1-14 in the United States, and account for approximately 48% of the deaths from unintentional injuries.
- Falls are the number one cause of ER visits for ages 1-14 and 25 and over (the number two cause for ages 15-24) in the US.

National Objectives:

Unintentional Injury Hospitalizations: A Healthy People 2020 National Objective for the general category of unintentional injuries is in development. The objective is to "reduce nonfatal unintentional injuries." There are specific objectives related to motor vehicle accidents, seatbelt use, poisonings, etc.

Unintentional Injury Deaths: Healthy People National Objectives for age-adjusted death rate due to unintentional injuries per 100,000 population are:

- Healthy People 2010: 17.5
- Healthy People 2020: 30.6

Motor Vehicle Deaths: Reduce deaths caused by motor vehicle crashes to no more than 12.4 per 100,000 people.

Prevent an increase in the rate of poisoning deaths:

- No more than 13.1 deaths per 100,000 population
- No more than 21.6 deaths per 100,000 among persons aged 35-64

Key Finding:

Unintentional Injury Hospitalizations: Table 23-1 shows a summary of the 2009 number of hospital discharges due to unintentional injuries among San Luis Obispo County residents. Almost half (49.6%) of the 1,795 nonfatal injuries (resulting in hospitalization) in San Luis Obispo County in 2009 were due to falls, compared to the state percentage of 53.2%. Since San Luis Obispo County has a higher percentage of elderly compared to the state, most falls occur among the elderly population. Among those ages 65 and older, the most common type of nonfatal unintentional injury was falls (78.5%). Approximately 6.5% of the unintentional nonfatal injuries in San Luis Obispo County in 2009 were due to motor vehicle accidents, compared to 12.3% for the state.

Table 23-1: Nonfatal Hospitalized Unintentional Injuries

San Luis Obispo County Residents, 2009

Unintentional Injury Type	All Ages		65 and Older	
	Number	Percent	Number	Percent
Fall	891	49.6%	635	78.5%
Motor vehicle accident	117	6.5%	24	3.0%
Poisoning (includes drug/alcohol)	126	7.0%	31	3.8%
Transport (other than motor vehicles or bicycles)	60	3.3%	8	1.0%
Natural/Environmental	35	1.9%	12	1.5%
Overexertion	39	2.2%	17	2.1%
Bicyclist (other than with motor vehicle)	29	1.6%	3	0.4%
Cut/Pierce	18	1.0%	2	0.2%
Fire/Burn	8	0.4%	2	0.2%
Drowning/Submersion	2	0.1%	0	0.0%
Struck by Object	33	1.8%	5	0.6%
Firearms (not homicide or suicide)	4	0.2%	1	0.1%
Other	433	24.1%	69	8.5%
Total	**1795**	**100.0%**	**809**	**100.0%**

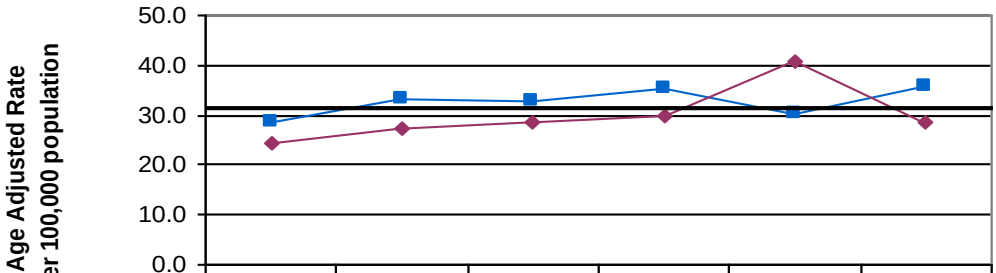
Data source: California Office of Statewide Health Planning and Development, Patient Discharge Data, Prepared by California Department of Public Health, Epidemiology & Prevention for Injury Control (EPIC) Branch

Unintentional Injury Deaths:

As seen in Figure 23-1, for San Luis Obispo County residents, there were 35.6 deaths per 100,000 population caused by unintentional injuries during 2007-2009, compared to 28.7 for California. The 2003-2005 rate of 30.4 was the first time since 1993 that San Luis Obispo's rate dropped below the States. San Luis Obispo ranked 28th among the 58 California counties (i.e., 27 counties had a lower death rate due to unintentional injuries. Unlike California, San Luis Obispo County has not met the Healthy People 2020 national objective for unintentional injury

deaths.

Figure 23-1: Unintentional Injury Death Rate
San Luis Obispo County and California, 1996 - 2009



	1996-1998	1999-2001	2001-2003	2003-2005	2005-2007	2007-2009
San Luis Obispo County	28.6	33.0	32.7	35.3	30.4	35.6
California	24.2	27.2	28.6	30.0	40.6	28.7

Healthy People 2020 Objective = 30.6

Data source: California Dept. of Health Services, Center for Health Statistics, County Health Status Profiles, 2011. *Note: Age-adjusted rates for 1999-2001 and 2000-2001 were calculated using the weighted-averages derived from the 2000 Standard Population. Prior to 1999, the 1940 Standard Population for age adjustments was used, and ICD-9 codes were used rather than ICD-10 codes; therefore, data comparisons between 1999 and prior years may not be valid.*

A summary of the 2005-2007 San Luis Obispo County deaths due to unintentional injuries by type of injury is presented in Table 23-2. Key findings include:

- The majority (80.4%) of unintentional injury deaths were due to motor vehicle accidents, poisonings, and falls.
- The majority (64.4%) of unintentional injury deaths were of males.
- The majority (70.1%) of the motor vehicle accident deaths were of males.

Table 23-2: Deaths due to Unintentional Injuries by Type of Injury

San Luis Obispo County Residents, 2005-2007 (Average)

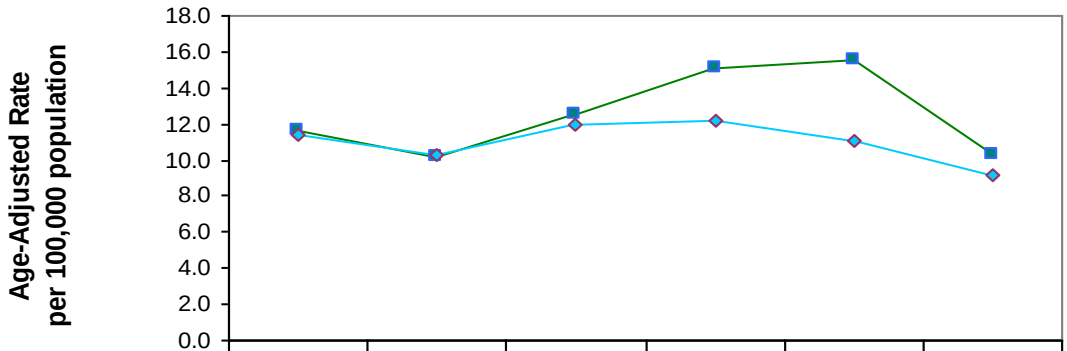
Unintentional Injury Type	Number (Percent)		
	Males	**Females**	**All**
Motor vehicle accidents	29.7 (41.0%)	12.7 (31.7%)	37.7%
Poisonings (includes drug/alcohol)	16 (22.1%)	11.3 (22.5%)	24.3%
Falls	11.7 (16.1%)	9.0 (22.5%)	18.4%
Drowning	2.7 (3.7%)	1.0 (2.5%)	3.3%
Transport - Other	1.3 (1.8%)	1.0 (2.5%)	2.1%
Suffocation	1.3 (1.8%)	1.3 (3.3%)	4.5%
Other	7.3 (10.1%)	3.7 (9.2%)	9.8%
Total	**72.3** (100%)	**40.0** (100%)	100%

Data sources: California Office of Statewide Health Planning and Development, Patient Hospital Discharge Data, prepared by California of Health Services, Epidemiology & Prevention for Injury Control (EPIC) Branch

Motor Vehicle Deaths:

As shown in Figure 23-2, for San Luis Obispo County residents, there were 10.3 deaths per 100,000 population caused by motor vehicle crashes (2007-2009 average), compared to 9.2 for California. San Luis Obispo ranked 29th among the 58 California counties (i.e., 28 counties had a lower death rate due to motor vehicle crashes). Both California and San Luis Obispo County presently meet the Healthy People 2020 national objective of 12.4 deaths per 100,000 population.

Figure 23-2: Motor Vehicle Crash Death Rate San Luis Obispo County and California, 1996-2009



	1996-1998	1999-2001	2001-2003	2003-2005	2005-2007	2007-2009
San Luis Obispo County	11.6	10.2	12.5	15.1	15.5	10.3
California	11.4	10.3	12.0	12.2	11.1	9.2

Data source: California Office of Statewide Health Planning and Development, Patient Hospital Discharge Data, prepared by California of Health Services, Epidemiology & Prevention for Injury Control (EPIC) Branch; data summarized by Health Care Analyst, San Luis Obispo County Public Health Department.

Primary Prevention Activities:

Primary prevention activities include:

- Increasing enforcement of primary seat belt, speeding, and drunk-driving laws.
- Increasing support and activities of targeted information and educational programs, including proper use of child safety seats, bicycle helmets, seat belts, and drunk-driving prevention.
- Providing drug abuse prevention and treatment programs to reduce unintentional poisoning with illegal drugs.
- Enacting and enforcing pool-fence ordinances to prevent drowning.

Data Sources:

Data sources for this report include:

- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/.
- California Department of Public Health, Center for Health Statistics, County Health Status Profiles; available at: http://www.cdph.ca.gov/programs/OHIR/Pages/default.aspx
- National Center for Injury Prevention and Control, Incidence and Economic Burden of Injury in the United States; available at: http://www.cdc.gov/ncipc/factsheets/CostBook/Economic_Burden_of_Injury.htm
- California Department of Public Health, Epidemiology & Prevention for Injury Control Branch (EPIC) at: http://www.cdph.ca.gov/programs/EPIC/Pages/default.aspx

Suicide Attempts and Deaths

Definition:

Suicide Attempts: Number of residents who attempted suicide, were hospitalized as a result, and were discharged during a specified year.

Suicide Deaths: Age-adjusted crude death rate (per 100,000 population) for residents who died of suicide during specified year(s).

Importance:

Suicide is a complex behavior that can be prevented in many cases by early recognition and treatment of mental disorders.

- Suicide was the ninth leading cause of death in the United States in 2009. More than 36,000 suicides occurred in the U.S. in 2010. This is the equivalent of 99 suicides per day.
- Suicide is the second leading cause of death among 25-34 year olds and the third leading cause of death among 15-24 year-olds.
- Firearms are the most commonly used method of suicide among males (56.0%), while poisoning is the most common method for females (40.3%).
- Males are four times more likely to die from suicide than are females. However, females attempt suicide about two to three times as often as men.
- Suicide rates for males are highest among those aged 75 and older, while suicide rates for females are highest among those aged 45-54.
- At least 90 percent of all people who kill themselves have a mental or substance abuse disorder. Other risk factors include prior suicide attempt, stressful life events, and access to lethal suicide methods.

National Objectives:

The Healthy People 2020 national objective for suicide deaths is to reduce the age adjusted death rate to only 10.2 suicides per 100,000 population.

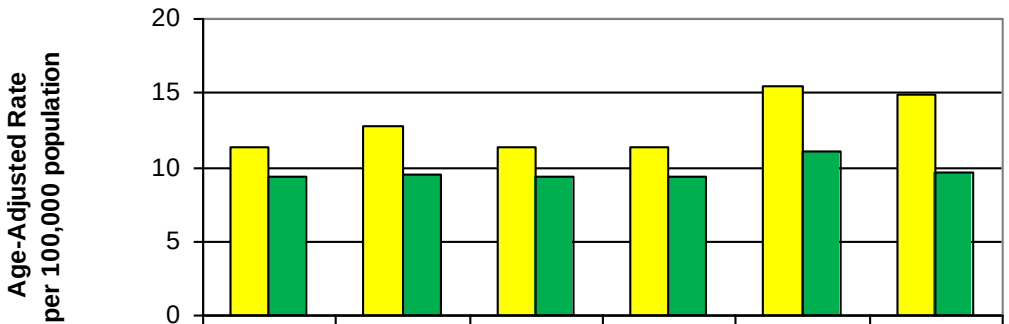
Key Findings:

Key findings include:

- Age-Adjusted Death Rate: As shown in Figure 24-1, the age-adjusted rates for deaths due to suicide has been higher among San Luis Obispo County residents compared to California residents as a whole. During 2007-2009, San Luis Obispo ranked 44th out of 58 counties (i.e., 43 counties had a lower suicide death rate than San Luis Obispo) compared to 36th from 2005-2007. Unlike the state, San Luis Obispo County does not meet the 2020 Healthy People national objective of 10.2 suicide deaths per 100,000.
- Elderly: In San Luis Obispo and California, the elderly are at high risk for suicide. Figure 24-2 shows that elderly men in San Luis Obispo County were much more vulnerable to suicide compared to elderly women.
- Method: Table 24-1 shows that the primary methods of suicide deaths among county residents were firearms (44.4%), followed by hanging/strangulation/suffocation (22.2%) and self-poisoning (20.0%).

Figure 24-1: Age Adjusted Suicide Death Rate Among Residents

San Luis Obispo and California, 1996-2009

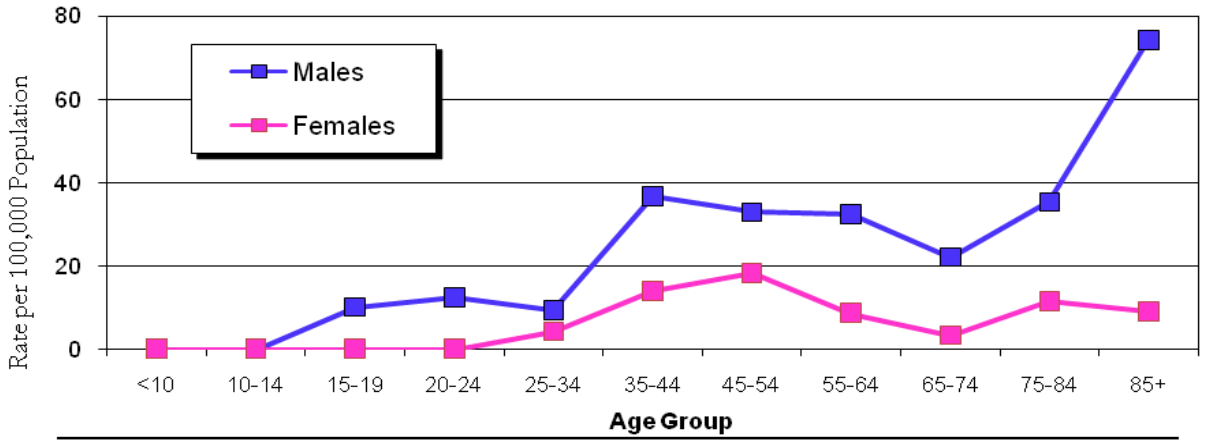


	1996-1998	1999-2001	2002-2004	2003-2005	2005-2007	2007-2009
San Luis Obispo County	11.3	12.8	11.4	11.3	15.5	14.9
California	9.4	9.5	9.4	9.3	11.1	9.6

Data source: California Dept. of Health Services, Center for Health Statistics, County Health Status Profiles, 2009.
Note: Age-adjusted rates for 1999 and later were calculated using the weighted-averages derived from the 2000 Standard Population. Prior to 1999, the 1940 Standard Population for age adjustments was used; therefore, data comparisons between 1999-2001 and 2002-2004 and prior years may not be valid.

Figure 24-2: Suicide Death Rate by Age Group and Sex

San Luis Obispo County, 2005-2007 (Average)



Source: California Dept. of Public Health, Center for Health Statistics, EPICenter, California Injury Data Online. Population data: State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000–2050. Sacramento, CA, May 2004.

Table 24-1: Suicide Death Methods

San Luis Obispo County Residents, 2009

Method of Suicide	Number (N)	Percent (%)
Firearms	20	44.4%
Self-poisoning (drugs or other solids, liquids, or gases/vapors)	9	20.0%
Hanging, strangulation or suffocation	10	22.2%
All other methods*	6	13.3%
Total	**45**	**100%**

* All other methods include: cutting/piercing, jumping from high places, drowning, crashing motor vehicle, or other.

Data source: California Department of Public Health, Center for Health Statistics, EPICenter, California Injury Data Online

Cost Analysis:

The greatest impact of suicide is in human suffering, loss of life, and the impact on others, especially friends and family. In addition, the medical costs are also very high. For San Luis Obispo County, the estimated lifetime costs (average for 1996-1997) for suicide attempts was $11,819,536. For fatal suicides, the cost was estimated at $21,738,299. The method of fatal suicides with the highest cost was firearms ($11,018,950 of the $21,738,299 costs). Cost data will be updated when more current data becomes available.

Primary Prevention Activities:

The U.S. Surgeon General issued a comprehensive report on suicide in May 2001 entitled *National Strategy for Suicide Prevention: Goals and Objectives for Action*. This was a collaborative effort by several national agencies and is available on the internet: http://www.mentalhealth.org/suicideprevention/. Examples of goals:

- Promote awareness that suicide is a public health problem that is preventable.
- Develop and implement strategies to reduce the stigma associated with being a consumer of mental health, substance abuse, and suicide prevention services.
- Promote efforts to reduce access to lethal means and methods of self-harm.

Another strategy is to promote healthy relationships with family and friends for at risk individuals, and facilitate contacts with community organizations to prevent social isolation.

Data Sources:

Data sources include:

- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/.
- Centers for Disease Control and Prevention, 2008 Suicide Fact Sheet; available at http://www.cdc.gov/injury/publications/index.html
- California Department of Public Health, Center for Health Statistics, County Health Status Profiles; available at: http://www.cdph.ca.gov/programs/OHIR/Pages/default.aspx
- California Department of Public Health, Center for Health Statistics, Vital Statistics Section, Public Health Information System.
- U.S. Census Bureau; 2000 census of population; available at http://www.census.gov
- California Office of Statewide Health Planning and Development, Patient

Discharge Dataset (prepared by California Department of Public Health, Injury Surveillance and Epidemiology Section); available at: http://www.cdph.ca.gov/programs/EPIC/Pages/default.aspx

- Cost data are from the Injury Cost and Consequences Model, based on California Hospital Discharge Data and Vital Statistics, Pacific Institute for Research and Evaluation; available at: http://www.dhs.ca.gov/ps/cdic/epic/html/injury_data.html
- U.S. Surgeon General, National Strategy for Suicide Prevention: Goals and Objectives for Action. May 2001. Available on internet at: http://www.mentalhealth.org/suicideprevention/
- California Department of Public Health: EPICenter, California Injury Data Online; available at: http://www.cdph.ca.gov/programs/EPIC/Pages/default.aspx
- American Community Survey 2005 Population Data available at: http://factfinder.census.gov

Asthma

Definition:

Asthma: a chronic, inflammatory disorder of the bronchi, in which the smooth muscle cells in the airway constrict. Constriction results in a narrow airway, wheezing, chest tightness, shortness of breath and coughing.

Importance:

Per the US Department of Health and Human Services, National Heart, Lung and Blood Institute, CDC and the California Department of Public Health:

- In the US, more than 22 million people are known to have asthma. 7 million of those are children. It is estimated that 44,500 children and adults in SLO County have been diagnosed with asthma.
- It is estimated that 3 million Californians currently have asthma.
- Approximately 3,600 people die each year from asthma in the US, 450 in California.
- In 2008, there were 167,477 hospital ER visits for asthma in the California; there were 945 in San Luis Obispo.
- In 2010, there were 34,796 hospitalizations due to asthma for residents of California, and 132 in SLO County.
- Approximately $1,174,330,204 was spent on asthma hospitalizations for residents in California in 2010. In SLO County in 2010, the average cost of a hospitalization due to asthma was $39,968, down from $42,844 in 2007.

National Objectives:

The Department of Health and Human Services seeks to "promote respiratory health through better prevention, detection, treatment and education efforts". Specific Healthy People 2020 goals include:

- Reduce asthma mortality as follows:
  - Reduce deaths in adults 35-64 years to 6.0 per million
  - Reduce asthma deaths in adults 65+ to 22.9 per million
- Reduce hospitalizations for asthma as follows:
  - Children under 5: 18.1 per 10,000
  - Persons 5-64 years: 8.6 per 10,000
  - Adults 65 and over: 20.3 per 10,000
- Reduce hospital emergency visits for asthma as follows:
  - Children under 5: 95.5 per 10,000
  - Persons aged 5-64 years: 49.1 per 10,000
  - Adults aged 65 and over: 13.2 per 10,000
- Reduce activity limitations among persons with asthma to 10.2%.

- Increase the proportion of persons with asthma who receive formal patient education, including information about community and self-help resources, as an essential part of the management of their condition to 14.4%.

Key Findings:

- In 2009, 19.8% of people with asthma did not receive an asthma management plan, thus not meeting the HP 2020 objective of 14.4% of persons receiving formal education, including information about community resources and self help resources.

- As shown in Table 25-1, San Luis Obispo County had a higher percentage of residents reporting diagnosis with asthma compared to others in California.

Table 25-1: Asthma* Prevalence
San Luis Obispo County vs. California, 2009

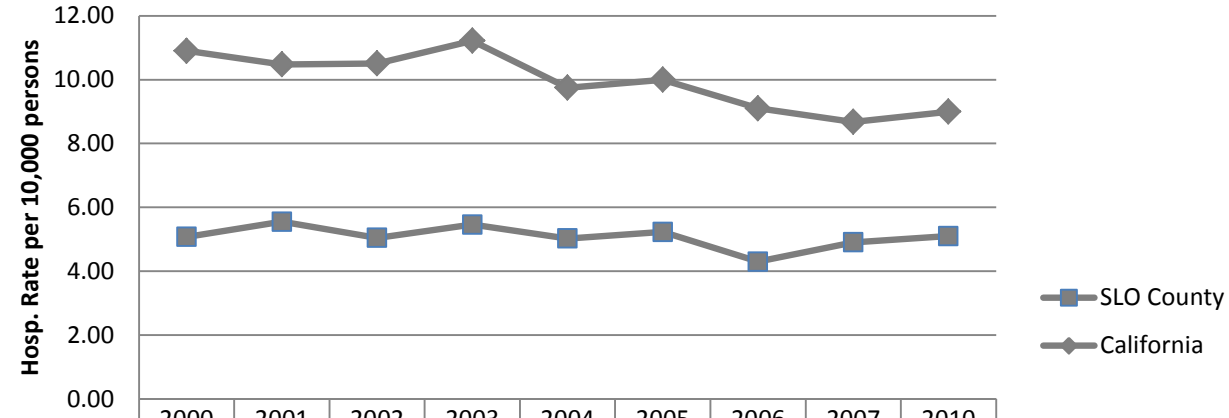
Geographic Region	**Children** (Ages 0-17)	**Adults** (Ages 18+)	**All Ages**
	Percent (95% Confidence Interval)		
San Luis Obispo County	**15.4** (8.5 – 22.3)	**17.1** (11.1 - 23.0)	**16.7** (11.7 - 21.8)
California	**14.2** (13.1 – 15.3)	**13.5** (12.8 – 14.3)	**13.7** (13.1 – 14.3)

* Persons who reported being diagnosed with asthma by a physician at any time.

Data Source: California Health Interview Survey 2009:

Asthma Hospitalizations: Figure 25-1 shows the age adjusted asthma hospitalization rate for San Luis Obispo County and California between 2000-2007, & 2010. (Data provided by the California Department of Public Health, Environmental Health Investigations Branch, California Breathing.) San Luis Obispo County age-adjusted rates are well below California's, but the gap is narrowing. California is showing significant improvement, while the rate for SLO County has remained somewhat constant.

Figure 25-1: Age Adjusted asthma hospitalizations per 10,000 residents, San Luis Obispo and California



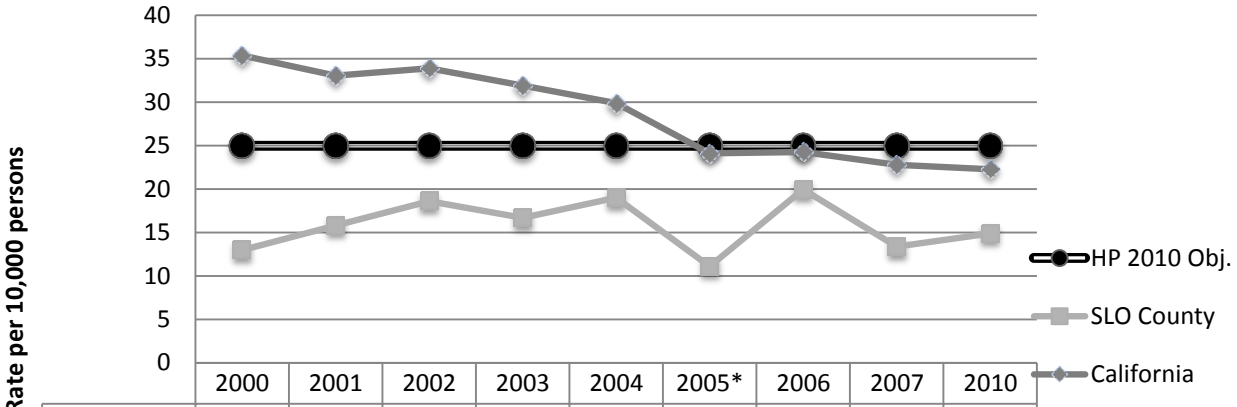
	2000	2001	2002	2003	2004	2005	2006	2007	2010
SLO County	5.08	5.55	5.05	5.46	5.02	5.23	4.30	4.91	5.10
California	10.90	10.48	10.51	11.22	9.75	10.00	9.10	8.68	9.00

Data provided by the CA. Dept. of Public Health Environmental Investigation Branch, California Breathing. Data based on Office of Statewide Hospital Planning and Development Hospital Discharge data. 2008-2009 data unavailable

Age Specific Rates of Asthma Hospitalizations

As seen in Figure 25-2, for San Luis Obispo County residents between the ages 0 and 4, San Luis Obispo County has had a consistently lower rate of asthma hospitalizations than California. It should be noted that the rate in 2005 for San Luis Obispo County is statistically unstable, while the 2005 data for California is not. San Luis Obispo County has consistently met the Healthy People 2010 & HP 2020 national objective for asthma hospitalization rates for children <5, while California began meeting the objective in 2005, and has continued to show improvement. For persons ages 5-64, Figure 25-3 shows that San Luis Obispo County has consistently met the HP 2010 & HP 2020 objective between 2000-2007 & 2010, while California first began meeting the objective in 2001, and has continued to ever since. For persons 65 and older, Figure 25-4 shows that San Luis Obispo County has consistently met the HP 2010 objective of 11 hospitalizations per 10,000 persons, while California has not.

Figure 25-2: Asthma Hospitalization Rate for Children <5 years per 10,000 persons

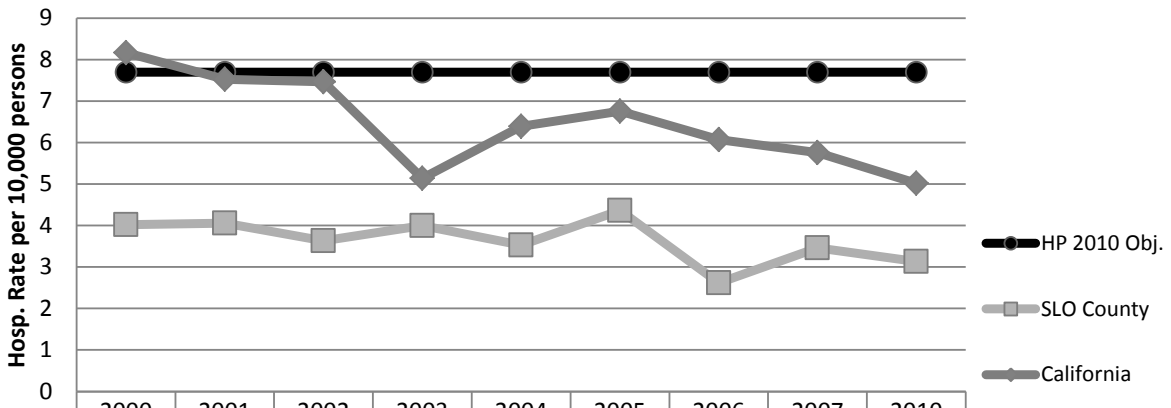


	2000	2001	2002	2003	2004	2005*	2006	2007	2010
HP 2010 Obj.	25	25	25	25	25	25	25	25	25
SLO County	12.98	15.82	18.62	16.70	19.01	11.10	19.97	13.38	14.90
California	35.40	33.07	33.92	31.91	29.88	24.10	24.28	22.80	22.30

*2005 rate is statistically unstable for San Luis Obispo County.

Data provided by the CA. Dept. of Public Health Environmental Investigation Branch, California Breathing. Data based on Office of Statewide Hospital Planning and Development Hospital Discharge data. 2008-2009 data unavailable

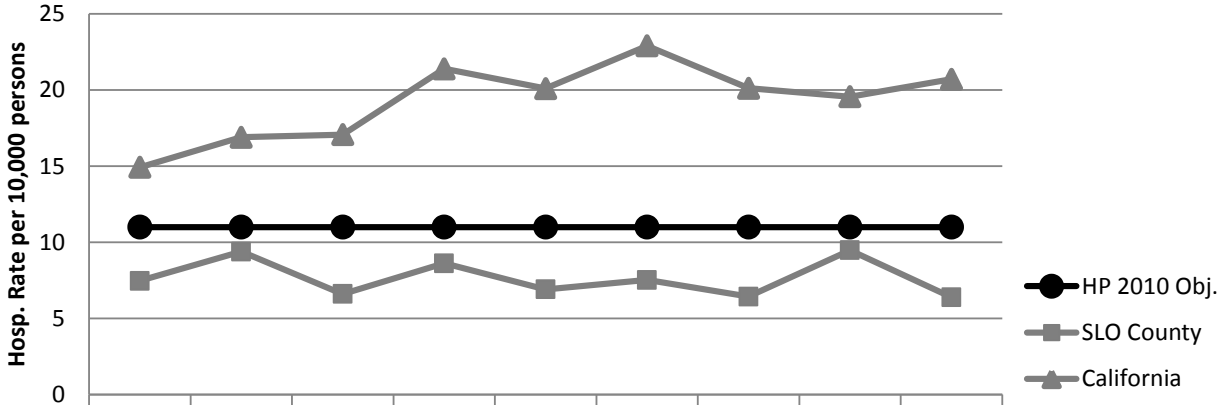
Figure 25-3: Asthma Hospitalization rate for persons ages 5-64, per 10,000 residents



	2000	2001	2002	2003	2004	2005	2006	2007	2010
HP 2010 Obj.	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7	7.7
SLO County	4.02	4.06	3.63	4.00	3.53	4.36	2.62	3.46	3.13
California	8.17	7.53	7.47	5.14	6.39	6.76	6.07	5.76	5.02

Data provided by the CA. Dept. of Public Health Environmental Investigation Branch, California Breathing. Data based on Office of Statewide Hospital Planning and Development Hospital Discharge data. 2008-2009 data unavailable

Figure 25-4: Asthma Hospitalization rate for persons ages >65, per 10,000 residents



	2000	2001	2002	2003	2004	2005	2006	2007	2010
HP 2010 Obj.	11	11	11	11	11	11	11	11	11
SLO County	7.47	9.40	6.61	8.62	6.92	7.53	6.44	9.48	6.4
California	14.92	16.90	17.07	21.39	20.10	22.89	20.11	19.56	20.7

Data provided by the CA. Dept. of Public Health Environmental Investigation Branch, California Breathing. Data based on Office of Statewide Hospital Planning and Development Hospital Discharge data. 2008-2009 data unavailable

Primary Prevention Activities:

Asthma can be better controlled by knowing the warning signs of an attack, staying away from things that trigger the attack, and following the advice of your doctor or other medical professional. The following important asthma triggers should be avoided by anyone with asthma, although individual triggers may be different for each person:

- Do not smoke, and avoid exposure to second-hand tobacco smoke
- Avoid dust mites by using mattress covers and pillowcase covers. Avoid down filled pillows, quilts or comforters.
- Pay attention to air quality forecasts, and try to plan your outdoor activities for when air pollution levels are lower.
- If you are allergic to pets, avoid having pets in your home. If you must live with a pet, be sure to bathe it weekly, and keep it outside as much as possible.
- Try to control mold in your home. Keep the humidity level in your home between 35% and 50%. Fix water leaks, which can allow mold to grow behind walls and under floors.

Data Sources:

Data sources for this report include:

- California Department of Public Health, Environmental Health Investigations Branch. www.californiabreathing.org
- California Department of Finance Demographic Research Unit, Table E-3 for years 2000-2007, *Race/Ethnic Population with Age and Sex detail, 2000-2050* for years 2008 and above. http://www.dof.ca.gov/research/demographic/reports/
- Healthy People 2020 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/.
- Office of Statewide Health Planning and Development(OSHPD), Health Information Division, Hospital Discharge Data; available at: http://www.oshpd.ca.gov/HID/Products/PatDischargeData/PublicDataSet/index.html
- Centers for Disease Control and Prevention: http://www.cdc.gov/asthma/faqs