Community Health Status Report

San Luis Obispo County
Public Health Department

July 2008

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 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:

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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 (over 98% of the land mass). 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.

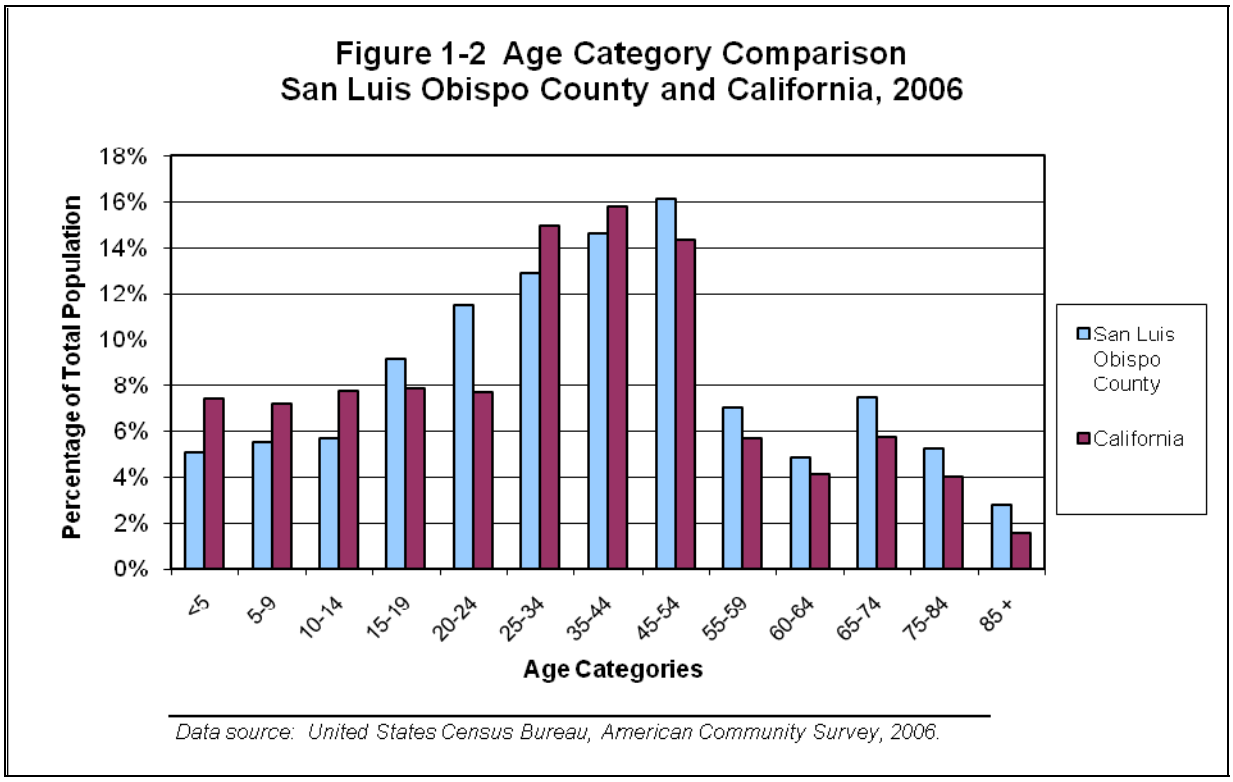
Figure 1-1: San Luis Obispo County Area Map

Map provided by MapQuest.com, Inc.

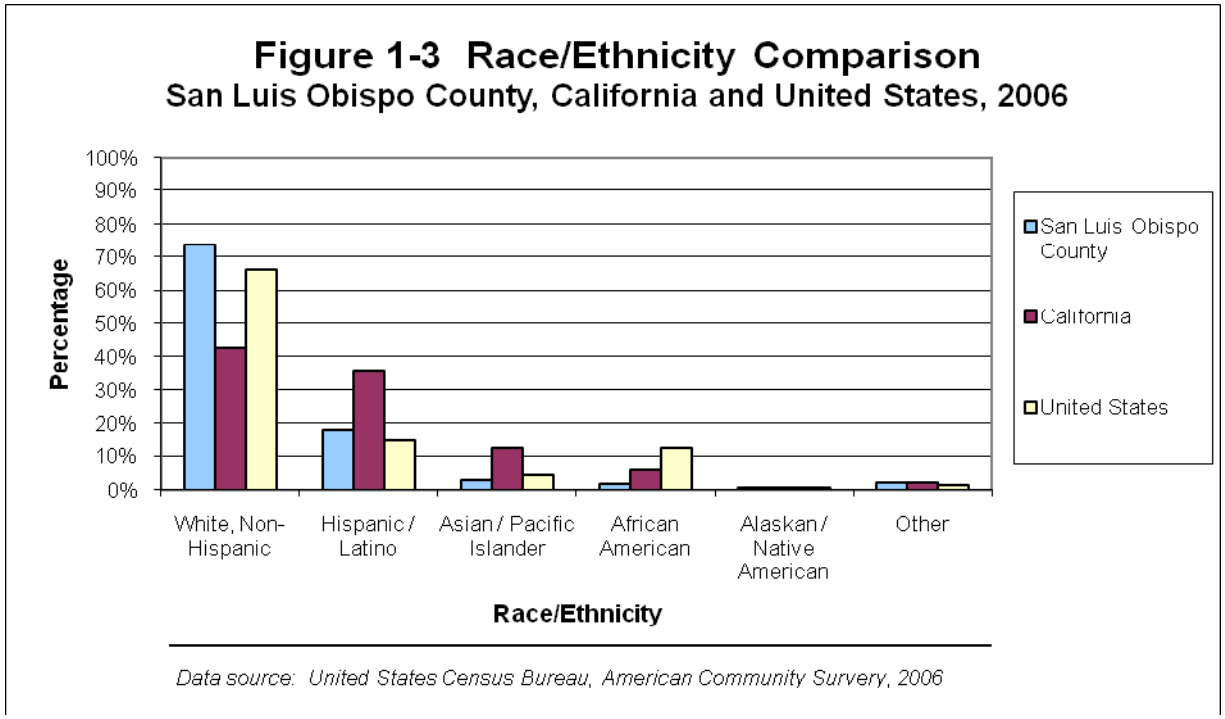
Industry: Key industries in the county include tourism, education, agriculture and Government.

Colleges / Universities: San Luis Obispo is the home of California Polytechnic State University, with an enrollment of approximately 19,777 undergraduate and graduate students in 2006-07, and Cuesta Community College, with two campuses in the county and a total enrollment of approximately 11,000 students.

Population: As of 2006, approximately 257,005 persons were 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 services. The median age of County residents was 38.5 in 2006, while California had a median age of 34.4. 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 both the State of California and the United States. San Luis Obispo County also has a lower percentage of Hispanic/Latino individuals compared to the State of California. A comparison of race/ethnicity is shown below in Figure 1-3.



Population Growth: San Luis Obispo County has the 23rd largest population in California (out of 58 counties). With a population of 42,963, 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 2006.

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

San Luis Obispo County, 2000 - 2006

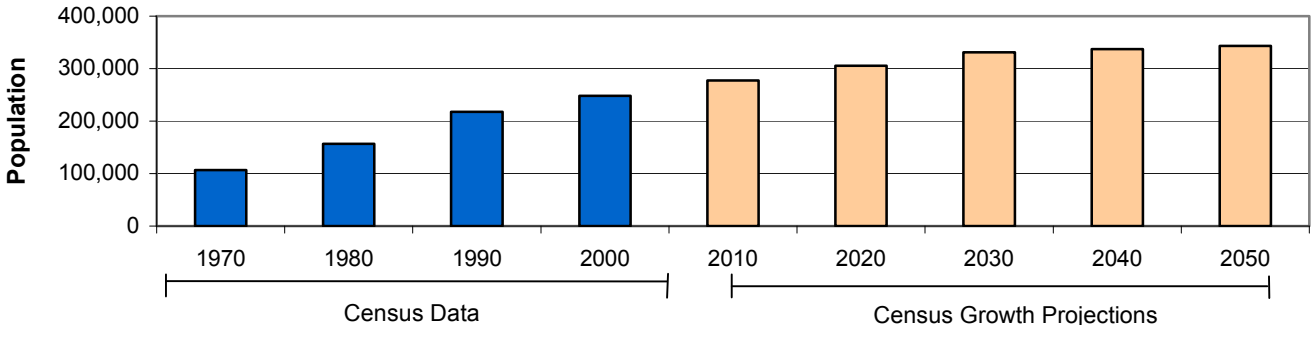
City / Area	2000 Population	2006 Population	Numeric Change	Percent Change
Arroyo Grande city	15,851	16,415	564	3.6%
Atascadero city	26,411	27,343	932	3.5%
Paso Robles city	24,297	27,973	3,676	15.1%
Grover Beach city	13,067	12,802	-265	-2.0%
Morro Bay city	10,350	10,135	-215	-2.0%
Pismo Beach city	8,551	8,394	-157	-1.8%%
San Luis Obispo city	44,174	42,963	-1,211	-2.7%
Other (unincorporated areas)	103,980	110,980	3,324	3.2%
San Luis Obispo County	**257,005**	**246,681**	**10,324**	**4.2%**

Data source: U.S. Census Bureau, 2006 Population Estimates, Census 2000, 1990 Census

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.

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 by Race/Ethnicity for California and Its Counties 2000–2050, Sacramento, California, May 2004.

Income: San Luis Obispo County's per capita personal income in 2006 was $32,180 adjusted for residence, compared to $35,219 for the State. San Luis Obispo County ranked 20th highest among the state's 58 counties for per capita personal income. The median household income for San Luis Obispo County residents has consistently been lower than the State's, as shown in Table 1-2.

Table 1-2: Median Household Income

San Luis Obispo County and California, 1979 - 2006

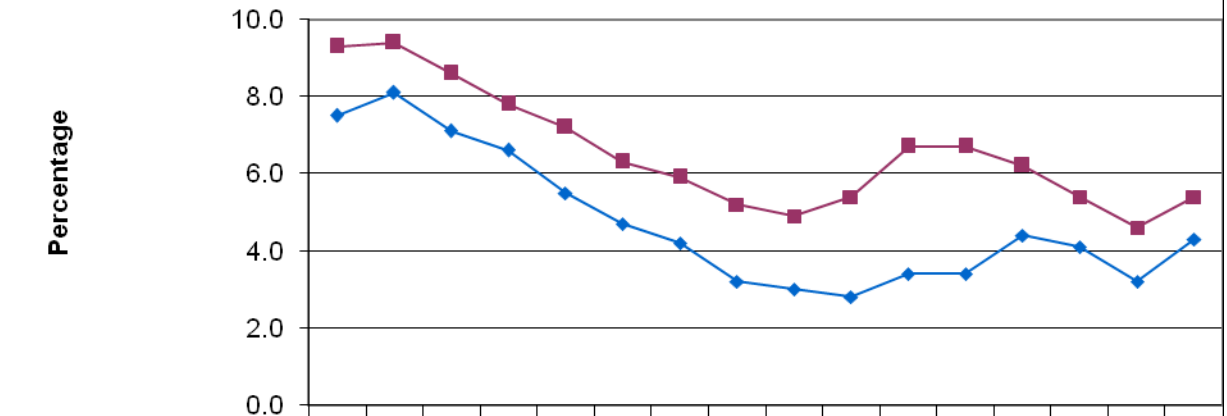
Region	1979	1989	2006
San Luis Obispo County	$14,805	$31,164	$50,209
California	$18,243	$35,798	$56,645

Data source, 1979 and 1989: California Department of Finance, California County Profiles; http://www.dof.ca.gov.
Data source, 2006: U.S. Census Bureau, American Community Profile, 2006. http://factfinder.census.gov

Unemployment: Compared to the State of California, San Luis Obispo County had a lower percentage of unemployment during the past decade. As of June 2007, per the California Employment Development Department, the unemployment rate in San Luis Obispo County was 4.3%, compared to 5.4% statewide in California.

Figure 1-5: Annual Average Rate of Unemployment

San Luis Obispo County and California, 1992 - 2007



	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
San Luis Obispo County	7.5	8.1	7.1	6.6	5.5	4.7	4.2	3.2	3.0	2.8	3.4	3.4	4.4	4.1	3.2	4.3
California	9.3	9.4	8.6	7.8	7.2	6.3	5.9	5.2	4.9	5.4	6.7	6.7	6.2	5.4	4.6	5.4

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

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), 2006.

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

ACS 2006	San Luis Obispo County	California
Total (individuals)	13.60%	13.10%
Families	6.20%	9.70%

[1] Number of individuals with family 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, 2006

Medi-Cal Population:

Medi-Cal is California's Medicaid healthcare program. This program pays for a variety of medical services for children and adults with limited income and resources. Medi-Cal is supported by federal and state taxes. Table 2-2 shows the Medi-Cal (Medicaid) eligible population for California and San Luis Obispo County for the Years 1996 – 2006. Compared to California, SLO County consistently has a smaller percentage of the population who are eligible (e.g., 10.8% versus 17.3% in 2006).

Table 2-3 further divides the Medi-Cal population (regular fee-for-service clients; excluding those in Managed Care Plans). From 1996 to 2004, the cost per user has increased from $350 to $530 (34%) for San Luis Obispo County and from $359 to $615 (42%) for California.

According to the Medi-Cal Policy Institute, California HealthCare Foundation, Oakland, California, January 2002:

> Many people think of Medi-Cal as one large, statewide public health insurance program. In reality, however, the Medi-Cal program is made up of 58 discrete county-based efforts that implement mandated federal and state policies in slightly different ways. Each California county is responsible for executing the California Department of Health Services' directives and administering the program's day-to-day operations, a fact which ultimately means that the Medi-Cal program may play out differently across county lines.

Table 2-2: 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%

Table 2-3: Medi-Cal Population*

*Limited to Regular Fee-for-Service (excludes Managed Care Plans)

	San Luis Obispo County				California			
Fiscal Year	Average Monthly Users (N)	Average Monthly Provider Payments	Users per 100 Eligibles	Cost per User	Average Monthly Users (N)	Average Monthly Provider Payments	Users per 100 Eligibles	Cost per User
FY 1995-96	12,540	$4,393,882	52.9	$350.39	2,198,528	$790,030,052	50.7	$359.35
FY 1996-97	13,143	$4,407,023	55.7	$335.31	2,129,902	$801,481,092	56.3	$376.30
FY 1997-98	12,939	$4,503,863	54.8	$348.08	1,929,060	$787,900,816	51.0	$408.44
FY 1998-99	12,169	$4,775,980	56.1	$392.47	1,688,707	$789,900,816	44.7	$467.75
FY 1999-00	12,374	$5,380,419	57.3	$434.82	1,656,318	$860,943,092	70.0	$519.79
FY 2000-01	12,523	$6,256,914	55.1	$499.63	1,667,211	$948,269,095	66.1	$568.78
FY 2001-02	13,543	$6,963,659	54.2	$514.19	1,892,714	$1,142,461,846	66.7	$603.61
FY 2002-03	25,781	$7,337,367	53.6	$530.89	2,955,990	$1,224,291,597	66.9	$619.46
FY 2002-03	27,240	$7,787,708	54.1	$528.41	3,148,187	$1,331,158,625	68.5	$617.17
FY 2003-04	28,215	$8,377,257	56.0	$529.84	3,278,404	$1,400,287,391	69.4	$615.22

Data source: State of California, Department of Health Service; Medical Care Statistics Section, Publications, Medi-Cal County Program Monthly Averages; http://www.dhs.ca.gov/MCSS.

Healthy Families Program:

The Healthy Families Program offers uninsured children from low-income families (at or below the 250% poverty level) access to low-cost health coverage. In San Luis Obispo County, the number of families enrolled in the Healthy Families Program has been growing significantly. The enrollment was 2,063 as of July 2000, and 4,216 as of July 2006, which is an increase of 51% over the past six years.

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 4,539 in 2007.

Child Health Disability Program:

The Child Health Disability Prevention (CHDP) Program provides free health and dental check-ups 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 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 2006/07 shows 12,977 San Luis Obispo County children received physical examinations. The primary medical reasons for referrals were: dental/oral (42%), eye/ear/nose/throat (15%), nutritional/growth (14%), and behavioral/developmental (5%). All chronic medical conditions (such as asthma or cardiac conditions) where a child is already receiving treatment were not included in the data.

As of July 2007, 55% of the children targeted for CHDP services received services. Children who qualify for low-income health insurance including MediCal, Healthy Families and Healthy Kids plans totaled 20,115 for FY 2006/07.

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 December 2007:

- 4,089 (1.55%) of the 263,747 residents of San Luis Obispo County received CalWORKs, compared to 4% for 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 April 2008, the number of recipients of SSI/SSP in San Luis Obispo County was 249 compared to 103,603 statewide. There were 22 California counties that had a higher number of SSI/SSP recipients. Data

source: http://www.cdss.ca.gov/research/PG343.htm .

Uninsured Population:

According to the National Center for Policy Analysis:

- 24% of Californians under age 65 (all income levels) are uninsured
- Children in California are more likely to be uninsured than in the rest of the nation--21 percent vs. 16 percent nationwide.

See Table 2-3 for the estimated percentage of the San Luis Obispo County and California populations who are uninsured per the 2005 California Health Interview Survey (CHIS). The approximate number of uninsured individuals in San Luis Obispo County is estimated by CHIS to be:

- 2,000 children (ages 0-17)
- 25,000 non-elderly adults (ages 18-64)

Table 2-3: Uninsured Population Estimates

	San Luis Obispo County	California
Children (ages 0-17)		
➢ % Uninsured	3.3% CI (0.5-6.1)*	6.4%
Non-elderly Adults (ages 18-64)		
➢ % Uninsured	16.2% CI (10.2-22.3)	18.8%

**Data is statistically unstable either because of a small sample size or large coefficient of variance.*
The 95% range (confidence interval) is provided for SLO County in parentheses.
Source: 2005 California Health Interview Survey, Los Angeles: UCLA Center for Health Policy Research, June 2005. Available at www.healthpolicy.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, 2006. 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, 2006

	San Luis Obispo County	California
Ages 5 to 15 years	5.1%	4.8%
Ages 16 to 64 years	10.4%	10.3%
Ages 65 and older	38.1%	41.1%

Internet Citation: Safety Net Profile Tool. September 2003. Agency for Healthcare Research and Quality, Rockville, MD. http://www.ahrq.gov/data/safetynet/. Data source cited: U.S. Census, American Community Profile, 2003.

Data Sources:

- National Center for Policy Analysis, Health Issues (2005) available at: http://www.ncpa.org/pi/health
- Healthy Families Current Enrollment, July 2006 available at: http://www.mrmib.ca.gov/MRMIB/HFP/HFPRpt15A.pdf
- California Health Interview Survey, AskCHIS, available at: http://www.chis.ucla.edu/main/default.asp

Education

Education and Health:

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 person is to report being in very good or excellent health, regardless of income.

According to the Department of Health and Human Services:

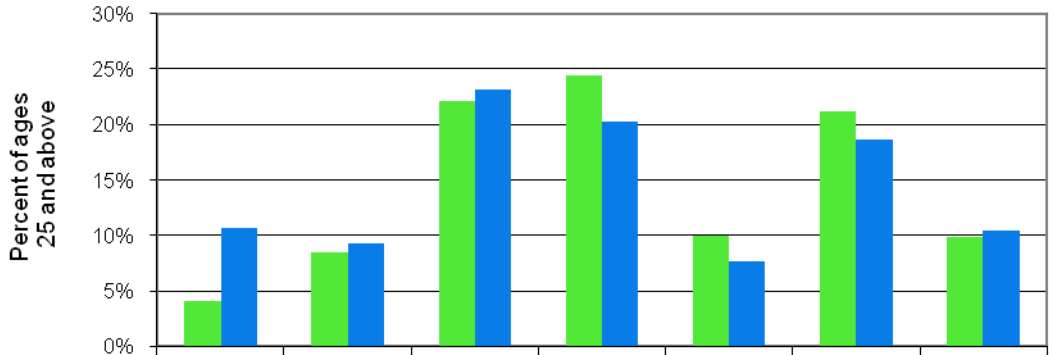
- Dropping out of school is associated with delayed employment opportunities, poverty, and poor health.
- During adolescence, dropping out of school is associated with multiple social and health problems, including substance abuse, delinquency, intentional and unintentional injury, and unintended pregnancy.

Educational Attainment:

San Luis Obispo County has a higher percentage of residents with some college or more versus statewide. However, SLO County has a slightly smaller percentage of High School Graduates (including equivalency degrees) than the state as a whole. Also, compared to the State, San Luis Obispo County has a lower percentage of residents with an education of 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, 2006

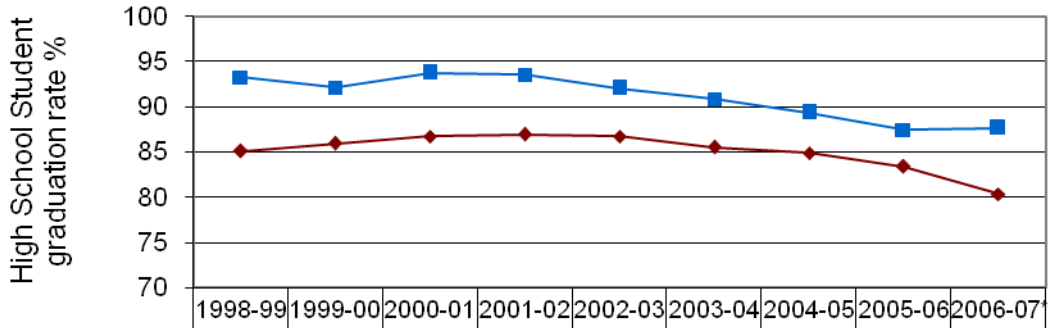


	Less than 9th Grade	9th to 12th Grade-no diploma	High School graduate	Some College	Associate Degree	Bachelors Degree	Advanced Degree
San Luis Obispo County	4.0%	8.5%	22.1%	24.4%	10.0%	21.2%	9.8%
State of California	10.6%	9.3%	23.2%	20.3%	7.6%	18.6%	10.4%

Data source: U.S. Census Bureau, 2006 American Community Service (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 graduated compared to the State of California. However, in the 2004/05 school year, San Luis Obispo County failed to meet the Healthy People 2010 objective of 90 percent for the first time since 1995. County and State graduation rates have been steadily declining for several years.

Figure 3-2: High School Graduation Rates
California and San Luis Obispo County, 1998-99 to 2006-07*



	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07*
California	85.1	85.9	86.7	86.9	86.7	85.5	84.9	83.4	80.3
San Luis Obispo County	93.2	92.1	93.7	93.5	92.0	90.8	89.3	87.4	87.6

*2006-07 is preliminary data
Data source: California Department of Education, Educational Demographics Unit, High School Graduation Rates based on NCES Definition, http://www.cde.ca.gov/demographics/ (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 2006-07 compared to California (2.5% and 4.4%, respectively).

Table 3-1: High School Dropout Rates (Public Schools), One-Year
San Luis Obispo County and California, 2006-07

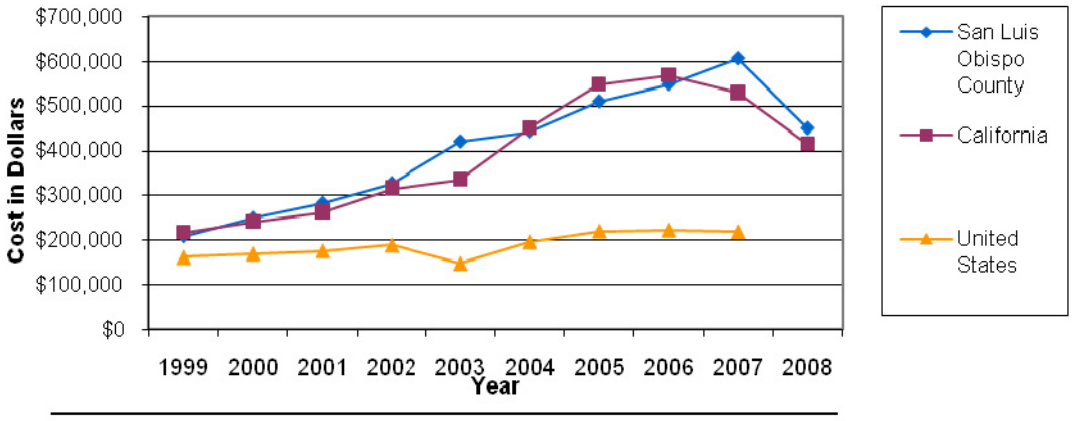
Race/Ethnicity	California		San Luis Obispo County	
	Number	Percent	Number	Percent
White	18,055	2.8%	163	1.9%
Hispanic or Latino	47,537	5.4%	122	3.8%
African American	12,712	7.8%	17	5.3%
Asian	3,415	2.0%	1	0.5%
Pacific Islander	714	5.7%	2	5.3%
Filipino	1,340	2.4%	2	5.3%
American Indian	987	5.9%	3	3.0%
Multiple or no response	2,696	5.5%	10	4.5%
Total	**87,456**	**4.4%**	**320**	**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 Statistics to compare states and school districts.]

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 gap had been widenening significantly. In 1997, California's median home price was about 28% higher than the national figure. 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. As seen in Table 4-2 however, San Luis Obispo is still one of the least affordable housing markets in the nation.

Figure 4-1: Median Home Prices



Data source: Data from California Association of Realtors and National Association of Realtors.

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 32% in the beginning of 2008. These numbers are lower compared to the United States, in which 69 percent of households are able to afford a median-priced home in 2008. 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, 2002 - 2008

Location	December 2002	December 2003	December 2005	December 2007	Q1 2008
San Luis Obispo County	22	16	11	28	32
California	28	23	17	33	44
United States	57	57	49	65	69

Data source: California Association of REALTORS®

Among 223 communities in the United States, San Luis Obispo County ranked as the 5th least affordable area for housing in the first quarter of 2008, as shown in Table 4-2.

Table 4-2: Twelve Least Affordable Housing Markets

United States, 2008

Market	Percent of homes affordable for median income family	Median family income ($100s)	Median sales price ($100s)	Rank
Los Angeles-Long Beach-Glendale, CA	10.5	59.8	412	1
New York-White Plains-Wayne, NY-NJ	12.5	63.0	490	2
San Francisco-San Mateo-Redwood City, CA	12.7	94.3	680	3
Salinas, CA	13.1	64.8	393	4
San Luis Obispo-Paso Robles, CA	**13.9**	**67.0**	**425**	**5**
Napa, CA	15.8	79.6	449	6
Miami-Miami Beach-Kendall, FL	16.5	49.2	300	7
Santa Ana-Anaheim-Irvine, CA	17.4	84.1	470	8
Santa Barbara-Santa Maria-Goleta, CA	19.6	65.2	380	9
Nassau-Suffolk, NY	20.1	97.1	420	10
Santa Cruz-Watsonville, CA	22.2	79.9	508	11
Santa Rosa-Petaluma, CA	22.6	77.8	391	12

Data source: National Association of Home Builders, Housing Opportunity Index, 2008 1st Quarter report

Other Housing Concerns:

The ACTION for Healthy Communities San Luis Obispo County Comprehensive Report (January 2007) 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 reports is also available at the United Way of San Luis Obispo County's website, under Community Partners, at http://www.unitedwayslo.org, and San Luis Obispo County Health Agency Epidemiology site, http://www.slocounty.ca.gov/health/publichealth/famhealth/epi/epidemiology_data_and_publications.htm*

Health Care

Basic Health Care:

The ACTION for Healthy Communities San Luis Obispo County Comprehensive Report* (January 2007) 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 2007 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, or at the San Luis Obispo County Epidemiology site, http://www.slocounty.ca.gov/health/publichealth/famhealth/epi.htm*

Health Care Professionals:

According to the Health Resources and Services Administration (HRSA) State Health Workforce Profile for California, December 2004, and a 2007 report from the University of California at San Francisco, state trends among key health professionals include:

- Registered Nurses (RNs): California had 647 RNs per 100,000 population in 2007, fewer than the national average of 825. There a conflicting studies regarding the number or nurses that will be available in the future. According to a UCSF study, the number of nurses per 100,000 is expected to rise forecasting out until 2030, due primarily to increasing capacity in nursing programs. (These numbers only include RNs employed in nursing.)

- Physicians: California had 248 physicians per 100,000 population in 2004, slightly below than the national average of 278. However, this number varies widely by geography. (These numbers indicate active, non-federal, patient care physicians excluding residents and fellows.)

- Dentists: California had 79.6 dentists per 100,000 population in 2004, more than the national average of 60.7 (These numbers include active, non-federal dentists in private practice.)

- Pharmacists: California had 66.1 pharmacists per 100,000 population in 2000. California ranked 43rd among the 50 states in number of pharmacists per capita. (Source: Bureau of Labor Statistics' Occupational Employment Statistics). In another study, California is ranked as one of the five states with the greatest unmet need for pharmacists in the nation. Pharmacy Technician supply is believed to be adequate, with growth projected into 2010.

- Mental Health Professionals: California had 7.6 licensed psychiatrists per 100,000 in 2000. This was less than the national average of 14.2. In 2004, California also had 36.3 psychologists per 100,000, more than the national average of 28. Also in 2004, California had 40.9 social workers per 100,000, more than the national average of 35.6.

Nursing Shortage: In 2000, the United States national supply of full time equivalent RNs was estimated to be 110,000 (6%) less than the demand in the United States and 12,663 (8%) less than the demand in California. According to the National Center for Health Workforce Analysis, if the causes for the shortage are not addressed, and if the current trends continue, the shortage is projected to grow to 29% in the United States. However, a study done at the University of California at San Francisco in 2007 shows that for California at least, the supply of registered nurses should increase, continuing until 2030. Factors affecting the supply of RNs include the number of nursing school graduates, aging of the RN workforce, relative earnings, and the emergence of alternative job opportunities.

Hospital Bed Capacity: Table 5-1 provides a summary of 2005 through 2007 results for California and San Luis Obispo County hospital bed capacity by three different categories: licensed beds, available beds, and staffed beds. The 2007 available bed occupancy rate was lower in San Luis Obispo County compared to California and the staffed bed occupancy rate was slightly higher 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, less 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, 2005 – 2007*

Region/Hospital	Number of Beds (N)			Occupancy Rate (%)		
	Licensed[1]	Available[2]	Staffed[2]	Licensed Beds	Available Beds	Staffed Beds
CALIFORNIA						
2005	79,653	72,253	63,022	60.5%	66.7%	76.5%
2006	79,636	72,314	62,899	60.2%	66.3%	76.2%
2007	79,324	72,215	62,582	60.6%	66.6%	76.8%
SLO COUNTY TOTAL*						
2005	461	461	270	47.6%	47.6%	81.2%
2006	461	461	270	48.8%	48.8%	83.5%
2007	461	461	270	49.3%	49.3%	84.2%
Arroyo Grande Community Hospital (Arroyo Grande)						
2005	65	65	58	51.5%	51.5%	57.7%
2006	65	65	58	57.1%	57.1%	64.0%
200	65	65	58	57.7%	57.7%	64.7%
French Hospital Medical Center (San Luis Obispo)						
2005	112	112	65	35.2%	35.2%	60.7%
2006	112	112	65	37.6%	37.6%	64.9%
2007	112	112	65	39.3%	39.3%	67.7%
Sierra Vista Regional Medical Center (San Luis Obispo)						
2005	200	200	86	42.9%	42.9%	99.8%
2006	200	200	88	43.5%	43.5%	99.4%
2007	200	200	87	43.0%	43.0%	99.3%
Twin Cities Community Hospital (Templeton)						
2005	84	84	61	72.3%	72.3%	99.1%
2006	84	84	59	70.1%	70.1%	99.5%
2007	84	84	60	70.9%	70.9%	99.3%
SLO County Mental Health						
2005	16	16	16	57.1%	57.1%	57.1%
2006	16	16	16	46.3%	46.3%	46.3%
2007	16	14	14	53.1%	59.6%	59.6%

Data source: Office of Statewide Health Planning and Development website (www.oshpd.state.ca.us). Data obtained from the Hospital Quarterly Internet Hospital Profile Characteristics (IHPC) query program, located in the Healthcare Information Resources, Reports, Hospital – Interactive Reports' section.

Note: Per OSPHD Healthcare Information Analyst, the utilization data listed in this report is an estimate by the hospital and is not based on actual patient census data.

[1] The number of licensed beds is calculated at end of the time period.

[2] The available number of beds and staffed number of beds are based on averages for the time period.

* Does not include Mental Health Beds

- 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, 2006

Region/Hospital	Non-Urgent[1]	Urgent[2]	Critical[3]	Resulting in Hospital Admission	**Total**
CALIFORNIA					
Number				14,101,481	**40,379,479**
Percent of Total				34.9%	100%
SLO COUNTY TOTAL[4, 5]					
Number	20,020	56,133	20,968	9,855	**87,266**
Percent of Total	22.9%	64.3%	24.0%	11.3%	100%
Sierra Vista Regional Medical Center					
Number	4,552	15,383	4,848	2,777	**21,564**
Percent of Total	21.1%	71.3%	22.5%	12.9%	100%
Twin Cities Community Hospital[4]					
Number	12,870	16,985	4,716	3,373	**30,955**
Percent of Total	41.6%	54.9%	15.2%	10.9%	100%
French Hospital Medical Center					
Number	1,062	9,533	4,228	1,876	**15,207**
Percent of Total	7.0%	62.7%	27.8%	12.3%	100%
Arroyo Grande Community Hospital					
Number	1,536	14,232	7,716	2,003	**21,944**
Percent of Total	7.0%	64.9%	35.2%	9.1%	100%

Source: Office of Statewide Health Planning and Development website (www.oshpd.state.ca.us). Data obtained from the Hospital Annual Utilization Data Profile, 2006, located in the Healthcare Information Resources, Utilization section of the Hospital Data.

[1] Non-Urgent 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] Urgent 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] Critical 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.

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 2006, including the number of EMS visits that resulted in hospital admissions. The definitions of the categorizations of non-urgent, urgent, and critical 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

- Border County Health Workforce Profiles: California, available at http://bhpr.hrsa.gov/healthworkforce/border/california/healthprofessions.htm

- Pharmacy Education and The University of California, Final Report of the Health Sciences Committee, April 2004. Available at http://www.ucop.edu/healthaffairs/REFORMATTED%20PHARMACY.pdf

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 10-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 National Center for Health Statistics reports that in 2004, the overall percent of pregnant women beginning prenatal care in the first trimester as 84%. This indicator has been steadily increasing since 1990 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 2010) related to prenatal care are:

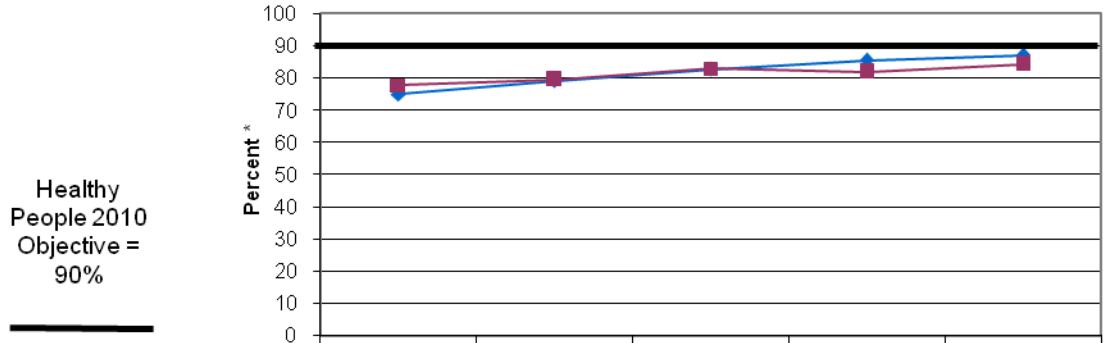
- Increase to at least 90 percent the proportion of all pregnant women who begin care in the first trimester of pregnancy.
- Increase to at least 90 percent the proportion of all live-born infants whose mothers receive prenatal care that is adequate or more than adequate according to the APNCU Index.

Key Findings:

Timely Prenatal Care: As shown in Figure 6-1, from 1991-2005, the percentage of all live-born infants whose mothers began prenatal care during their first trimester:

- Is increasing slowly in San Luis Obispo County as it has in the State of California as a whole.
- Is lower in San Luis Obispo County than statewide.

Figure 6-1: Timely Prenatal Care: First Trimester
California and San Luis Obispo County, 1991 - 2005



	1991-1993	1994-1996	1997-1999	2000-2002	2003-2005
California	74.9	79.1	82.6	85.5	87.0
San Luis Obispo County	77.8	79.5	82.9	81.8	84.3

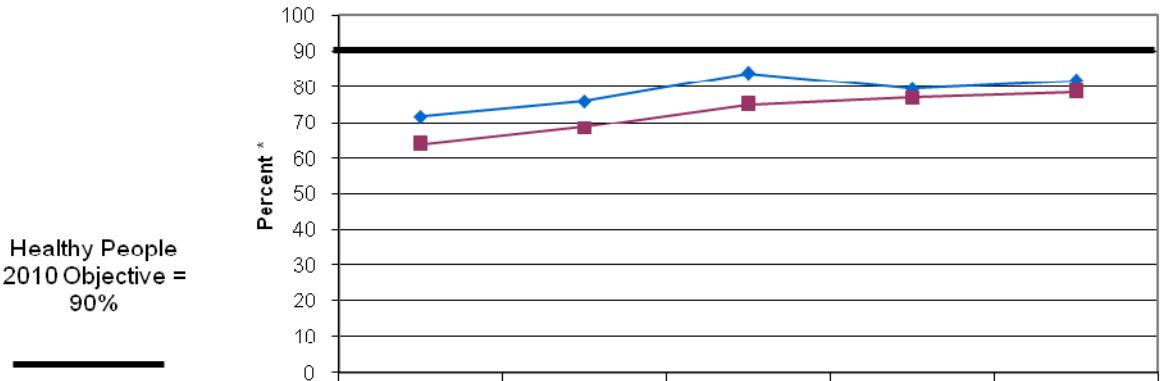
** Percent refers to percent of liveborn infants whose moms began prenatal care in their 1st trimester.* *Data source: County Health Status Profiles, California Department of Public Health, Center for Health Statistics.*

- During 2003-2005, San Luis Obispo ranked 24th out of 58 counties (i.e., 23 counties in California had a higher percentage of live-born infants whose mothers obtained prenatal care in their first trimester). This ranking is up from 32nd for 2002-2004.

Adequate Prenatal Care: As shown in Figure 6-2, from 1991-2005, the percentage of all live-born infants whose mothers received prenatal care that was adequate or more than adequate:

- Has improved, although the national objective of 90% has not been achieved.
- Has been higher for San Luis Obispo County residents compared to the State of California.
- During 2003-2005, San Luis Obispo ranked 7th out of 58 counties (i.e., 6 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 11th in 2000-2002.

Figure 6-2: Adequacy of Prenatal Care
California and San Luis Obispo County, 1991-2005



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

* ***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 approximately $3.38 on hospital bills, birth complications, and low birthweight babies.

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 2010 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/
- Cost data were obtained from the March of Dimes website: http://www.modimes.org/

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 population of 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.
- With 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 2010 goal for Family Planning is "every pregnancy in the United States should be intended."

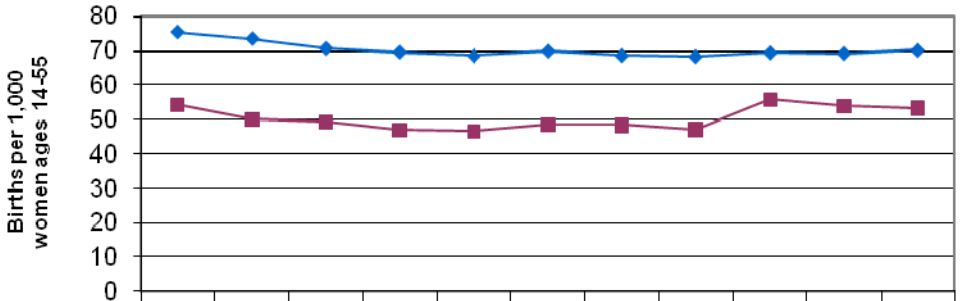
Key Findings:

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 both California and San Luis Obispo County residents since 1995. There has been a slight increase in the General Fertility Rate since 2003, however the county rate has remained lower than the state rate each year.

Distribution of births by race/ethnicity: As shown in Figures 7-2 and 7-3, between 2000 and 2005, the fertility rate among San Luis Obispo County residents has been lower compared to that of other Californians for both non-Hispanic Whites and Hispanics. The fertility rate for Hispanics in San Luis Obispo County is higher than the fertility rate for, non-Hispanic Whites.

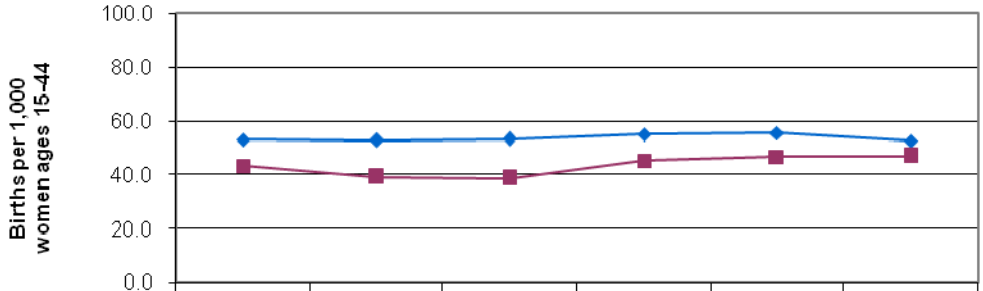
Figure 7-1: General Fertility Rate for Residents
California and San Luis Obispo County, 1995-2005



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
California	75.5	73.3	70.8	69.7	68.6	70	68.7	68.4	69.5	69.3	70.2
San Luis Obispo County	54.4	50.2	49.3	47.1	46.7	48.5	48.5	47.3	55.8	54.0	53.4

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

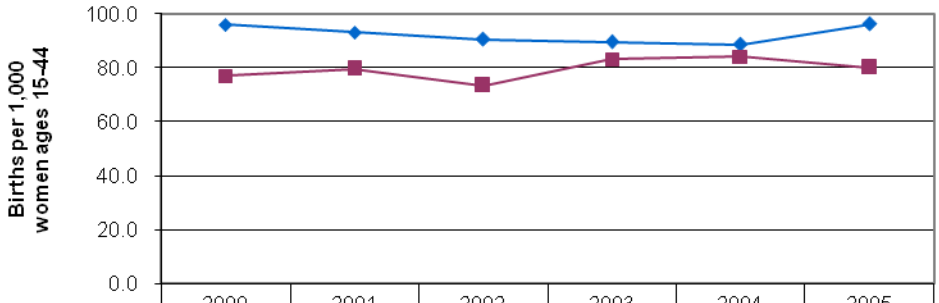
Figure 7-2: General Fertility Rate for non-Hispanic Whites
California and San Luis Obispo County, 2000-2005



	2000	2001	2002	2003	2004	2005
California	53.1	52.7	53.3	55.0	55.5	52.4
San Luis Obispo County	43.3	39.0	38.4	45.1	46.6	46.8

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, 2000-2005

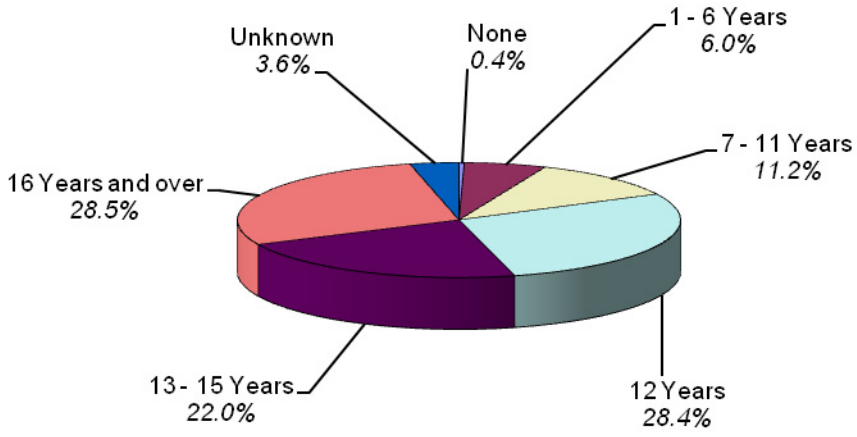


	2000	2001	2002	2003	2004	2005
California	95.9	93.0	90.4	89.6	88.6	96.2
San Luis Obispo County	76.8	79.4	73.4	83.2	84.2	80.0

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

Distribution of births by mother's educational attainment: As shown in Figure 7-4, the majority (79%) of San Luis Obispo County residents who gave birth in 2005 had completed twelve of more years of school. Over half completed at least some higher education, and seven percent completed 6th grade or less.

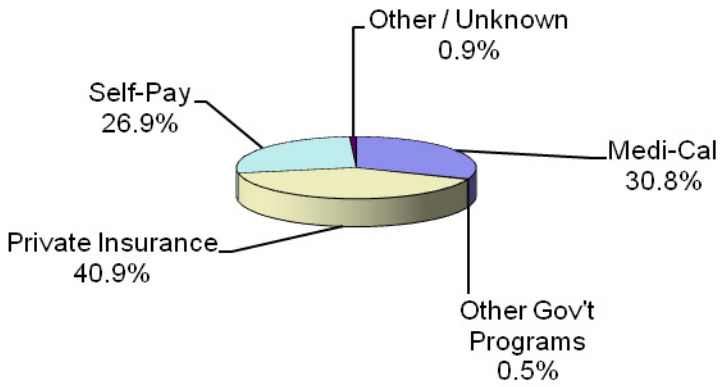
Figure 7-4: Mother's Years of Education
San Luis Obispo County Residents (18 and Older), 2005



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

Payment for Delivery: Almost one-third of births to residents of San Luis Obispo County are covered by Medi-Cal (California's publicly funded Medicaid program). As shown in Figure 7-5, approximately 41% are paid for through prepaid health plans or private insurance.

Figure 7-5: Payment Source for Delivery of Infants
San Luis Obispo County Residents, 2005



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

Primary Prevention: Primary prevention activities 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 2004 or State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 1990–1999*. Sacramento, CA, May 2004.
- 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:

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 preventing childhood obesity, 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.
- In general, the American Academy of Pediatrics considers breastfeeding to be "the ideal method of feeding and nurturing infants" and recommends that infants be breastfed for at least the first 6 months of life.
- Rates of breastfeeding are highest among college-educated women and women aged 35 years and older. The lowest rates of breastfeeding are found among those whose infants are at highest risk of poor health and development: those aged 21 years and under and those with low educational levels. However, this group has shown the greatest increase in breastfeeding rates since 1989.

National Objective:

Increase the proportion of mothers who breastfeed their babies:

- In early postpartum period to 75%.
- At six months to 50%.
- At one year to 25%.

Key Findings:

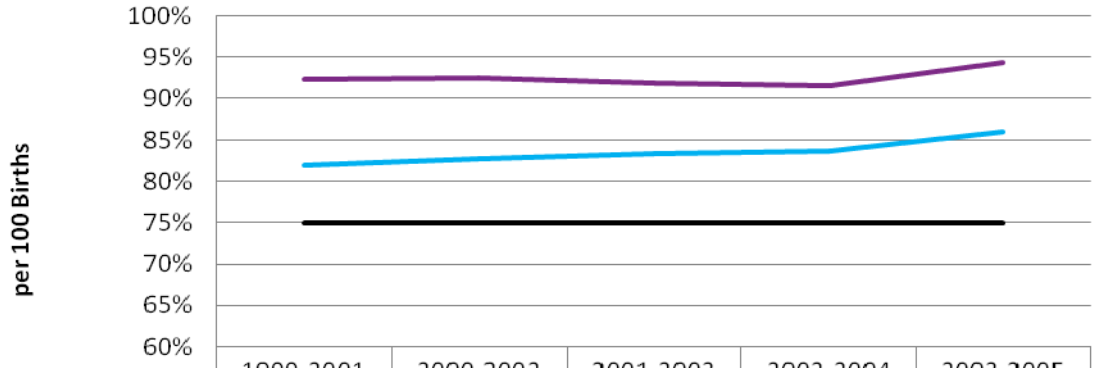
Key findings for breastfeeding initiation, as shown in Figure 8-1, include:

- The number of mothers initiating breastfeeding in infants was higher in San Luis Obispo County compared to the state of California. This difference was statistically significant.
- During 2003-2005, San Luis Obispo County ranked 8th among California's 58 counties for breastfeeding (i.e., only 7 counties had a higher rate).
- Both the state and SLO County have achieved the Healthy People national objectives for 2010 regarding postpartum breastfeeding.
- The number of breastfed infants per 100 hospital births has increased from 1996 to 2005.
- According a three-year study done by the nutrition department at the local university (Cal Poly), 63% of women in the County of SLO breastfeed for at least six months and 36% breastfeed for at least nine months.

Between July 2006-June 2007, 74.2% (approx the same as the previous year) of the post delivery women enrolled in the Women, Infant and Children (WIC) program were breastfeeding their infants. Of these women approximately 56% were exclusively breastfeeding and 44% 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 Initiation

California and San Luis Obispo County 1999-2005



	1999-2001	2000-2002	2001-2003	2002-2004	2003-2005
2010 National Objectives	75%	75%	75%	75%	75%
San Luis Obispo County	92.30%	92.50%	91.90%	91.60%	94%
California	82%	82.80%	83.30%	83.70%	86%

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

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:

- California Department of Public Health, Center for Health Statistics, County Health Status Profiles 2003-2007; available at: http://www.cdph.ca.gov/programs/OHIR/Pages/default.aspx
- Healthy People 2010 Objectives, U.S. Department of Health and Human Services, Office of Public Health and Science; available at: http://www.health.gov/healthypeople/
- California Polytechnic State University, San Luis Obispo. ARI Final Report. Breastfeeding Duration and Other Infant Feeding Practices Among Mothers in San Luis Obispo County. 2005.

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 require public assistance and 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% increase in annual teen births between 2003 and 2008.

National Objective:

The Healthy People 2010 objective related to teen pregnancies is to reduce pregnancies among females aged 15-17 to no more than 45 per 1,000 adolescents.

Key Findings:

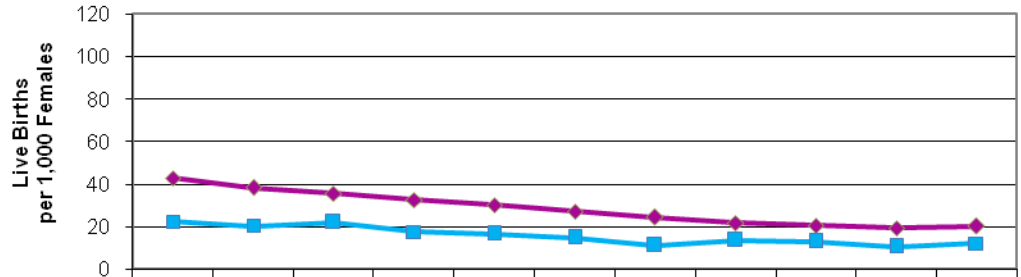
Less than 15 years: In San Luis Obispo County, the number of teen births has ranged between 1 and 6 each year from 1993 through 2007. Birth rates for this age group have not been calculated, since they would be unreliable and a comparison with state rates would not be valid. The statewide birth rate among teen females ages 15 and younger has declining from 1992 to 2005.

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 the state. State rates have been declining for both age groups; while SLO County rates have generally been declining for both 15-17 year olds and (albeit more slowly)18-19 year olds. The 2005 SLO County birth rate for 15-17 year olds increased slightly from its 10 year low in 2004. The 2005 SLO County birth rate for 18-19 year olds was at a 10 year low in 2005. Teen births have declined steadily as a percentage of all births in San Luis Obispo County since 1996.

During 2003-2005, San Luis Obispo ranked 10th out of 58 counties (i.e., 9 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 2007).

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

San Luis Obispo County and California, 1995 - 2005

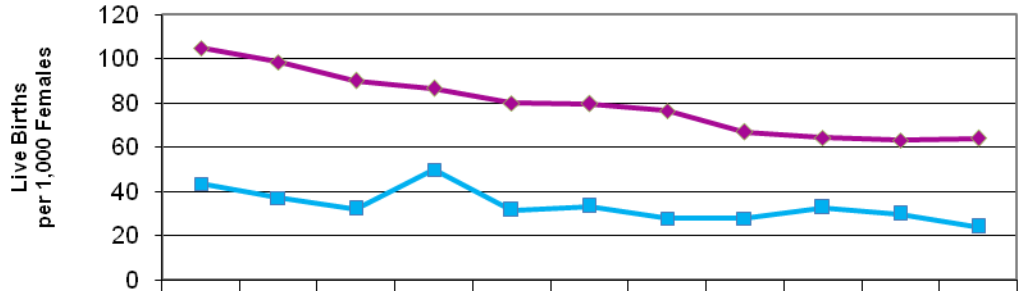


	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
California	42.9	38.3	35.7	32.6	30.1	27.2	24.4	21.7	20.5	19.3	20.3
San Luis Obispo	22.3	20.3	21.9	17.5	16.6	14.8	11.1	13.4	13.0	10.6	12.1

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

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

San Luis Obispo County and California, 1995 - 2005



	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005
California	105.	98.6	90.1	86.7	80.0	79.6	76.6	66.8	64.4	63.3	63.9
San Luis Obispo	43.6	37.2	32.1	49.9	31.5	33.4	27.8	27.8	32.8	29.8	24.0

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

Race/Ethnicity: The teen birth rates vary by race/ethnicity. For example, in 2005, the differences in teen birth rates by major age and race/ethnicity groups in California and San Luis Obispo County are shown on the next page in Table 9-1.

Table 9-1: Teen Birth Rates by Race/Ethnicity and Age Category

Live Births per 1,000 Females in Age and Race Group, 2005

Race/Ethnicity	California	San Luis Obispo County
White	14.8	9.9
Hispanic	65.4	47.6
African American	38.4	39.6
Asian	10.8	*
Pacific Islander	32.8	*

* Birth rate not reported for these cells due to small numbers.

Primary Prevention Activities:

Several San Luis Obispo Family Health Services (FHS) programs strive to decrease teen pregnancy, enhance nutrition, decrease tobacco use, and encourage early entrance into prenatal care in order to improve the health of these mothers. Primary prevention activities include:

- Encouraging abstinence and help in developing skills for decision-making, communication, and negotiation about sex.
- Providing parents with information on discussing sex with their children.
- Providing comprehensive and early sex education to youths, with particular attention being given to pregnancy, human immunodeficiency virus (HIV), acquired immunodeficiency syndrome (AIDS), and other sexually transmitted diseases.
- Encouraging communities to work together to increase the availability of contraceptives.
- Promoting sexual responsibility among young men through education and enforcement of statutory rape, establishment of paternity, and child support laws.

Cost Analysis:

The Temporary Assistance to Needy Families (TANF) [changed from Aid to Families with Dependent Children (AFDC) in 1997] and Medi-Cal costs for one teen pregnancy, birth and first year of support exceeds $10,000 according to Department of Health Services (DHS). During the years 2002-2004, San Luis Obispo County had an average of 18 fewer teen births per 1,000 females compared to the California average for each year. The 15-19 year old female population in the county during this time period was approximately 10,000; therefore, the county had an estimated 176 fewer teen births than the state average per year. Per DHS, most (74.7%) teen deliveries are paid for by Medi-Cal. Therefore, at a first-year cost of $10,000 per teen birth (assuming 75% need assistance), the estimated cost savings to government has been $1,320,000 per year for first year costs alone.

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.applications.dhs.ca.gov/vsq/default.asp
- County Health Status Profiles 2007, Teen Birth Rates (California Department of Public Health: Birth Statistical Master Files, 2003-2005.)
- State of California, Department of Finance, *Race/Ethnic Population with Age and Sex Detail, 2000–2050*. Sacramento, CA, May 2004.
- 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) and born to residents.

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

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, 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 2010 are to:

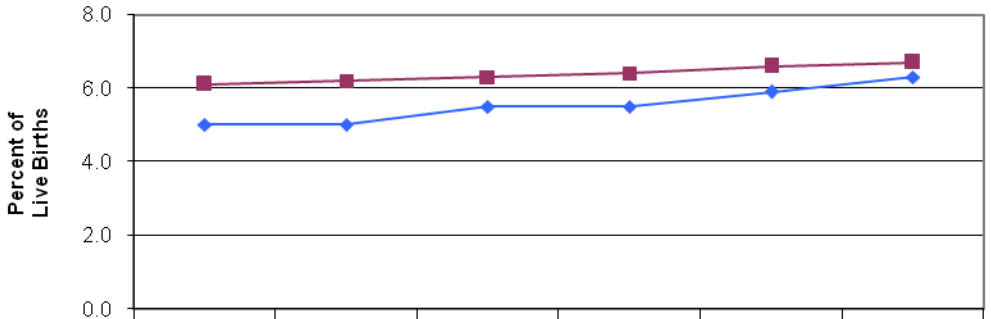
- Reduce low birthweight incidence to no more than 5 percent of all live births.
- Reduce very low birthweight to no more than 1 percent of live births.

Key Findings:

Some of the key finding reveal:

- San Luis Obispo County has consistently had a lower percentage of low birthweight infants compared to the state from 1994-2005, as shown in Figure 10-1. The gap is lessening as San Luis Obispo's percentage increases gradually.
- San Luis Obispo County ranked 28th out of the 58 California counties (i.e., 27 counties had a lower percentage of low birthweight infants born to residents compared to San Luis Obispo County) during 2003-2005.
- Sine 1995, SLO County has failed to meet the Healthy People 2010 low birthrate goal.
- The average percentage of very low birthweight infants (less than 1,500 grams at birth) in San Luis Obispo County has remained consistently between 0.9 and 1.1. The numbers are almost the same statewide.

Figure 10-1: Low Birthweight Infants (<2500 grams)
California and San Luis Obispo County, 1994-2005



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

Data source: County Health Status Profiles, California Department of Public Health, Center for Health Statistics, 2007.

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 abstinence and contraceptive education.
- Increasing education about the risks to the fetus if the mother maintains harmful behaviors before and during pregnancy, 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 $3.38 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 2010 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. As of 2006, the U.S. ranked 184 out of 226 for its infant mortality rate, meaning that 42 countries have lower infant mortality rates than the U.S.
- In the past decade, critical measures of increased risk for infant death, such as incidence of low birthweight, have increased.
- The disparity in infant mortality rates between whites and specific ethnic groups (African Americans, American Indian/Alaska Natives, Native Hawaiians, and Puerto Ricans) persists. The rate for African Americans is more than twice the national average.
- Sudden Infant Death Syndrome (SIDS) is the leading cause of infant mortality after the first month of life, accounting for about one-third of all deaths during this period.
- In 2003, the ten leading causes of infant mortality (and the corresponding rate per 100,000 live births) in the United States were:
  - Birth defects (137.4)
  - Pre-term or low birthweight (118.6)
  - Sudden Infant Death Syndrome (52.9)
  - Maternal pregnancy complications (41.8)
  - Placenta/cord complications (26.9)
  - Accidents (unintentional injuries) (23.1)
  - Respiratory Distress Syndrome (20.3)
  - Infections (18.9)
  - Neonatal hemorrhage (15.9)
  - Diseases of the circulatory system (14.5)

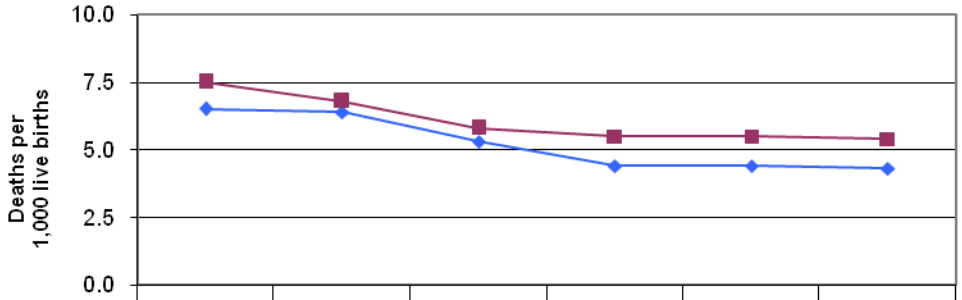
National Objective:

The Healthy People national objective for 2010 is to reduce infant mortality to a rate of no more than 4.5 deaths per 1,000 live births. San Luis Obispo County's most recent rate of 4.4 (which is unreliable) just barely meets the national Healthy People 2010 objective.

Key Findings:

- Between 1990 and 2004, San Luis Obispo County had a lower infant mortality rate compared to California, as shown in Figure 11-1. The rates for both California and San Luis Obispo County have also improved.
- San Luis Obispo County achieved the national Healthy People 2000 objective of no more than 7 infant deaths per 1,000 live births and continues to work toward meeting the 2010 objective of less than 4.5 infant deaths per 1,000 live births.
- The United States' infant mortality rate has declined significantly since 1915, when the rate was approximately 100 per 1,000 live births (1 in 10). The United States' rate in 1999 was 7.0 per 1,000 live births.
- Rates of death by race for infants in the County are all statistically unreliable due to small numbers, so 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, 1990-2004



	1990-92	1993-95	1996, 1997, 1999*	1999-2001*	2001-2003*	2002-2004*
San Luis Obispo County	6.5	6.4	5.3	4.4	4.4	4.3
California	7.5	6.8	5.8	5.5	5.5	5.4

**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, 2007.

Primary Prevention Activities:

Primary prevention activities include:

- Beginning prenatal care early and maintaining 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 2010 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 a specific disease or numbers of 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, and rubella have not disappeared. Rather, they have receded and will reemerge if the vaccination coverage drops. Vaccines protect more that 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 group immunity (i.e., they live among vaccinated persons who help limit the spread of the disease).

National Objective:

Healthy People 2010 objectives related to childhood vaccinations include:

- Goal 14-22: Achieve and maintain effective vaccination coverage levels of at least 90 percent for all universally recommended vaccines among young children (aged 19 to 35 months) 4 DtaP, 3 Polio, 1 MMR, 3 HepB, 3 Hib, 1 Varicella.
- Goal 14-23a-h: Maintain vaccination coverage levels of at least 95 percent for children in licensed day care facilities, and children in kindergarten, through the first grade. Targets only DtaP, Polio, & MMR.

Key Findings:

Childcare Programs

- The percentage of 2 to 4 year-11 month old children enrolled in child care programs in SLO County with all required vaccinations was slightly lower in 2007 (89.9%) than in 2002 (90.7%).
- Neither the State nor San Luis Obispo met the Health People 2010, 14-23 Goal of 95% coverage for all three vaccines: DtaP, Polio and MMR.
- In Fall 2007, the percentage of up-to-date children in childcare centers operated by Head Start rose from a low of 65.85% in 2006 to 96.36%. .
- San Luis Obispo improved at least slightly in all categories from 2006.
- The Fall 2007 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, 2007

Category	California	San Luis Obispo County
Total Facilities Reporting	9,965	96
Number of Enrollees	512,490	3,235
% of Entrants with All Required Immunizations (excludes those with exemptions due to personal medical reasons or personal beliefs)	93.5%	89.86%
Total with all - Public Child Care Centers	94.34%	91.74% of 551
Total with all - Private Child Care Centers	92.27%	89.50% of 1,978
Total with all - Head Start Child Care Centers	96.36%	89.32% of 418
Percent (%) vaccinated for:		
Diphtheria, tetanus, pertussis (4th dose)	95.4%	92.36%
Polio (3 doses)	97.3%	96.35%
Measles, mumps, rubella (1 dose)	97.2%	96.07%
Haemophilus influenzae type b (Hib) (1 dose)	97.1%	95.73%
Hepatitis B (3 doses)	96.1%	95.52%
Varicella (1 dose or MD documented disease)	96.5%	95.49%
Conditional Entrants	4.89%	6.85%
Exemption - Personal Medical Exemption	0.17%	0.77%
Exemption - Personal Beliefs Exemption	1.44%	2.78%

Data source: Fall 2006 Childcare Center Immunization Assessment Results, California Department of Public Health, Immunization Branch at http://ww2.cdph.ca.gov/programs/immunize/Documents/2007%20Child%20Care%20Assessment%20Report.pdf

Key Findings (continued):

Kindergarten Students:

- The State and County trends for kindergarten students with all required vaccinations have remained constant since 2002. The county has declined since 2002, with 89.6% in 2007 vs. 92% in 2002. The State was slightly lower in 2007 (92.69%) versus (92.3%) in 2002.
- Both the State and the County "Kindergartens" met the Health People 2010, 14-23 Goal of 95% coverage for all three vaccines: DtaP, Polio and MMR.
- In Fall 2007, the percentage of San Luis Obispo County Kindergarten students with Personal Belief Exemptions was 3.84%, compared to 1.56% for the State.
- See Table 12-2 for a summary of the immunization results for kindergarten students.

Table 12-2: Kindergarten Immunization Assessment

Percent of Enrollees Adequately Immunized, 2007

Category	California	San Luis Obispo County
Number of Schools	8,481	64
Number of Students	499,301	2,579
% of Entrants with All Required Immunizations	92.1%	89.6%
% Immunized for:		
Diphtheria, tetanus, pertussis (4 doses)	95.9%	95.3%
Polio (3 doses)	96.2%	95.7%
Measles, mumps, rubella (1st dose)	96.3%	99.5%
Measles, mumps, rubella (2nd dose)	96.3%	95.4%
Hepatitis B (3 doses)	98.4%	98.5%
Varicella (1 dose)	98.9%	99.0%
Conditional Entrants	6.14%	6.28%
Exemptions - Personal Medical Exemption	0.18%	0.31%
Exemptions - Personal Beliefs Exemption	1.56%	3.84%

Data source: Fall 2007 Kindergarten Student Immunization Assessment Results, California Department of Public Health, Immunization Branch at http://www.dhs.ca.gov/dcdc/izgroup/pdf/2007%20Kindergarten%20Assessment%20Report.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. 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 vaccinations to children, as appropriate, and utilize (especially pediatricians) the CAIR.
- All school districts in SLO County are on the CAIR. 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 and other local providers.
- Providing provider education on immunizations through the quarterly SLO Public Health Bulletin, the Quarterly Immunization Collaborative meeting, and the monthly School Nurses 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 2007 Child Care Center and Kindergarten Student Immunization Assessments, California Department of Public Health, Immunization Branch
- Healthy People 2010 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, such as the Morbidity and Mortality Weekly Report (MMWR) 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 MRSA are only required to be reported when hospitalization is required.

Key Findings:

Table 13-1 contains a summary of selected communicable diseases reported to San Luis Obispo County Health Department between 1997 and 2007 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, Shigellosis and Campylobacteriosis
- 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	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Sexually Transmitted											
Chlamydia	233	341	265	324	306	313	511	470	549	567	631
Gonorrhea	37	31	31	26	20	17	56	37	49	42	48
Syphilis	3	4	2	7	0	8	10	12	13	9	18
Hepatitis											
Hepatitis A	25	9	2	9	3	7	4	4	5	12	5
Hepatitis B (Acute)	2	0	2	0	1	1	1	6	4	3	1
Hepatitis B (Chronic)	15	23	38	32	39	66	36	35	90	69	28
Hepatitis C (Acute)	1	3	3	0	0	1	1	0	1	6	3
Hepatitis C (Chronic)	74	159	208	256	336	1213	612	402	503	452	364
Intestinal Infections											
Campylobacteriosis	61	34	30	37	33	18	30	43	54	54	53
Giardiasis	58	51	33	22	30	6	12	11	19	21	7
Salmonellosis	35	33	12	19	31	8	22	25	23	42	27
Shigellosis	8	7	2	2	5	1	2	1	3	20	4
Amebiasis	1	4	3	0	2	0	0	1	1	1	0
E. Coli (Including O157:H7)	4	2	0	4	2	2	2	2	6	2	4
Cryptosporidiosis	0	0	0	3	5	3	8	53	6	23	18
Meningitis and Related Conditions											
Meningitis, viral	35	50	13	13	17	9	28	29	22	21	27
Meningitis, bacterial	7	3	1	5	6	3	3	4	7	3	4
Meningococcal meningitis	2	1	3	0	0	0	1	0	0	1	0
Meningococcemia	1	3	1	0	2	0	0	0	1	2	0
Meningitis, unknown	0	1	0	1	0	1	3	2	1	2	1
Meningitis, fungal	0	2	2	0	0	0	0	0	3	2	0
Encephalitis, viral	3	1	0	1	0	1	0	2	2	1	0
Vector-Borne											
Lyme Disease	1	2	1	1	2	0	2	0	1	4	9
Malaria	1	0	0	1	2	0	0	0	1	0	1
Other Diseases											
Coccidioidomycosis (Valley Fever)	38	28	32	44	80	27	71	72	116	147	129
AIDS	29	20	20	29	20	22	13	8	21	1	9
HIV*	-	-	-	-	-	-	-	-	-	-	27
Tuberculosis	10	16	7	9	11	7	8	4	8	2	2
Pertussis	9	2	1	0	2	1	1	0	109	75	16
Measles (Rubeola)	0	0	0	0	0	0	0	0	0	0	0
Rubella	1	0	0	0	0	0	0	0	0	0	0
Tetanus	1	1	0	0	0	0	0	0	0	0	0

Data source: San Luis Obispo County Health Dept., Automated Vital Statistics System, except AIDS data from San Luis Obispo County Public Health Dept. confidential AIDS database and Tuberculosis data from California DHS. Note that the large number of Hepatitis C (Chronic) cases reported in 2002 (n = 1,212) was partially due to late reporting to the Public Health Department by one of the institutions. Some of these cases were from prior years. The increase in the number of pertussis cases in 2005 was due to a statewide outbreak.

*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 unique identifiers as was previously established. While this now allows consistent tracking of HIV, all previously reported data is now considered unreliable.

Importance:

According to the Joint United Nations Programme on HIV/AIDS, in 2007, the following trends (worldwide) were evident:

- 33.2 million people were estimated to be living with HIV/AIDS (This is a reduction of 6.3 million from 2006, due to revised estimates from India and sub-Saharan Africa).
- During 2007, AIDS caused the deaths of an estimated 2.1 million people, including and 290,000 children under 15.

According to the Centers for Disease Control and Prevention:

- The cumulative number of AIDS cases reported as of 2005 was 984,154 in the United States; of these approximately 14.5% were in California.

According to the Department of Health and Human Services:

- Currently, HIV/AIDS has been reported in virtually every racial and ethnic population, every age group, and every socioeconomic group in every State and most large cities in the United States.
- 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.
- Most transmission of HIV in the United States is among sexual partners of people with HIV and/or people who share needle-injecting equipment that has been contaminated with HIV.
- 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:

The goals of the Department of Health and Human Services in the prevention of HIV transmission are to ensure that high risk individuals know their HIV status, to preserve the status of those uninfected with HIV making certain that those with HIV do not transmit it to others, and to make sure that those infected with HIV have

access to appropriate therapies. Healthy People Objectives include:

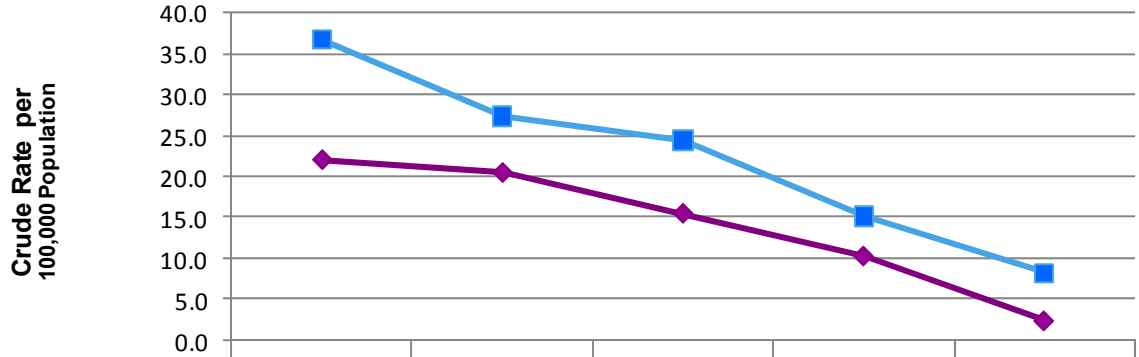
- Reduce the number of deaths attributed to HIV infection to 0.7 deaths per 100,000 people.
- Reduce new AIDS cases among teens and adults to 1 new case per 100,000 people.

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 1991-1993 span.
- 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) is higher than in the general population. The incidence of AIDS cases has declined between the mid-1990s and 2001.
- As shown in Figure 14-3, the number of AIDS deaths has declined significantly since 1994, due to the introduction of Highly Active Anti-Viral Therapy (HAART).
- 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 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*

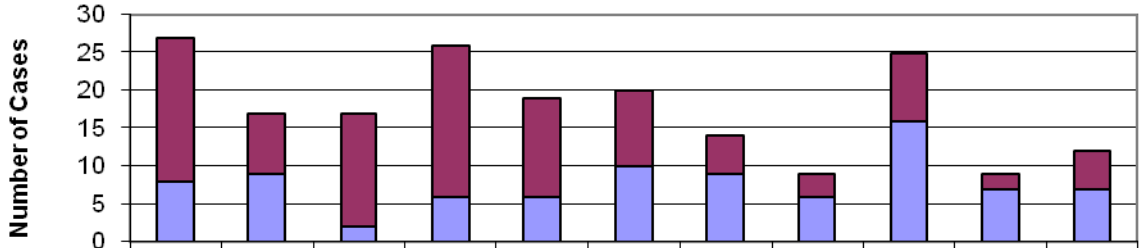
California and San Luis Obispo County 1991-2005



	1991-1993	1994-1996	1997-1999	2000-2002	2003-2005
San Luis Obispo County	22.0	20.43	15.45	10.23	2.3
California	36.7	27.36	24.48	15.23	8.3

Figure 14-2: AIDS Cases

San Luis Obispo County Residents
Community and Institutionalized**, 1997-2007

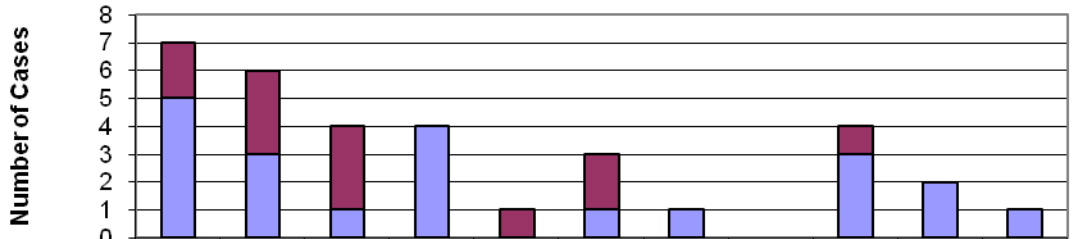


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Institution	19	8	15	20	13	10	5	3	9	2	5
Community	8	9	2	6	6	10	9	6	16	7	7

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*, 1997-2007

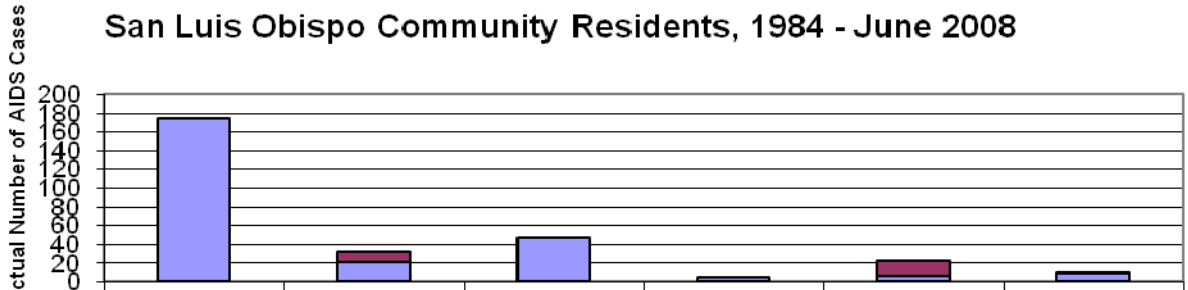


	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Institution	2	3	3	0	1	2	0	0	1	0	0
Community	5	3	1	4	0	1	1	0	3	2	1

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.*

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 to test for HIV and including information about how to reduce the risk of transmitting HIV to their children
- 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 1,039,000 to 1,185,000 people in the United States currently are infected with HIV. 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 HIV antibody testing at Public Health sites throughout the county and at community sites using an outreach van. Planned Parenthood, County Drug and Alcohol Services, the Economic Opportunity Commission 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 HIV Program. Public Health offers two case management programs, including one for people with HIV paroling from the State's prison system.

Data Sources:

Data sources for this report include:

- Healthy People 2010 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 Diseases

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

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

- Despite the fact that STDs are quite preventable, they continue to be an increasingly large public health concern.
- STDs have many long lasting repercussions including loss of or decrease in reproductive health, danger to fetal health, perinatal problems and even cancer.
- In many STDs, 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 STDs 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 2010 objectives for the most common STDs are as follows:

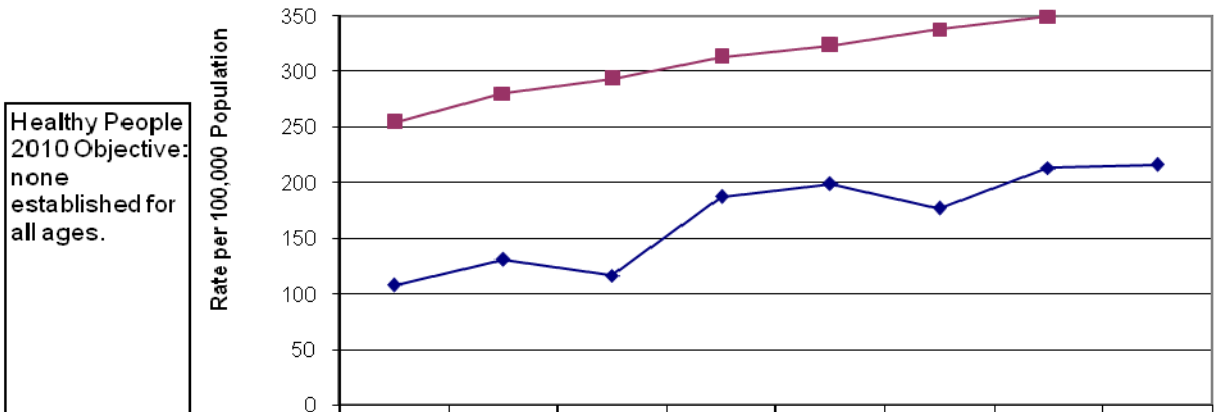
- Reduce proportion of males and females aged 15 to 24 infected with chlamydia trachomatis to only 3 percent.
- Reduce gonorrhea to only 19 new cases per 100,000 people.
- Reduce occurrence of primary and secondary syphilis to 0.2 cases per 100,000 people.
- Reduce the percentage of adults between the ages of 20 and 29 infected with genital herpes to only 14 percent.

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

- Chlamydia is the most commonly diagnosed STD in San Luis Obispo County as of 2007. The rate of reported Chlamydia in San Luis Obispo County is significantly lower compared to the State, as shown in Figure 15-1.
- Between 1999 and 2006, the rate of reported gonorrhea in San Luis Obispo County is 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 19 new cases per 100,000 people.
- As shown in Figure 15-3, the rate of reported syphilis (primary and secondary) increased markedly in California from 2000 to 2005. In San Luis Obispo County, there were between zero and 0.8 cases per 100,000

population reported during 1997-2005.

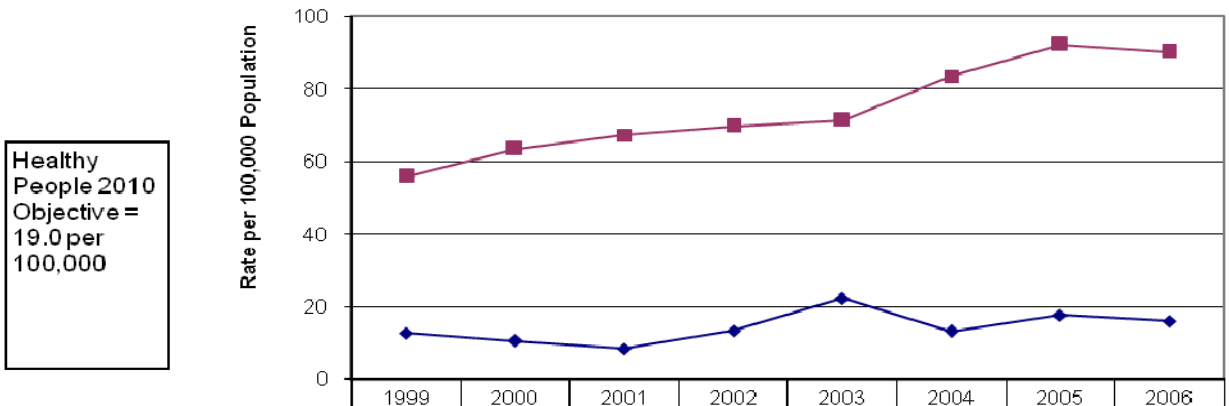
Figure 15-1: Reported Incidence of Chlamydia
San Luis Obispo County and California, 1999 - 2006



	1999	2000	2001	2002	2003	2004	2005	2006
San Luis Obispo County	107.9	130.8	116.5	187.4	198.8	176.9	213.3	216.1
California	254.4	280.5	293.6	312.9	323.4	338.1	349.2	363.5

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

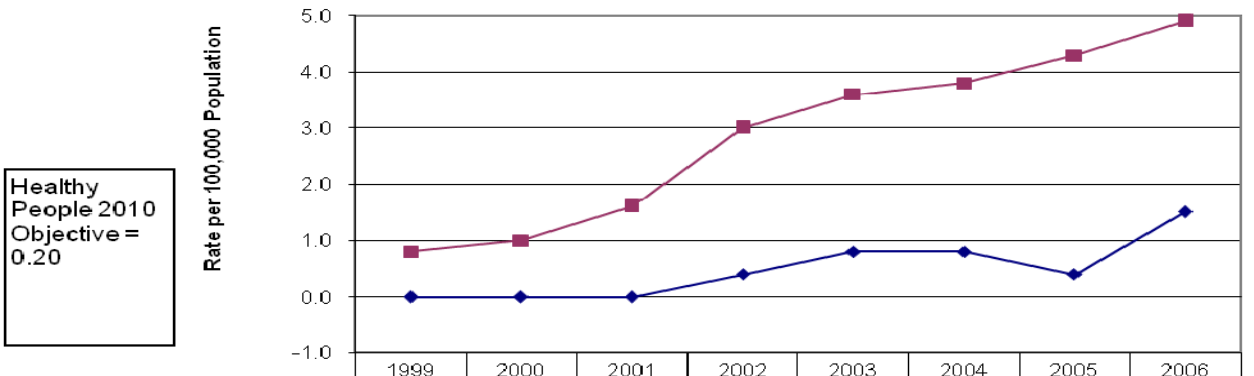
Figure 15-2: Reported Incidence of Gonorrhea
San Luis Obispo County and California, 1999 - 2006



	1999	2000	2001	2002	2003	2004	2005	2006
San Luis Obispo County	12.7	10.5	8.3	13.4	22.2	13.1	17.6	15.9
California	55.8	63.4	67.2	69.7	71.4	83.5	92.2	90.2

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

Figure 15-3: Reported Incidence of Syphilis
San Luis Obispo County and California, 1999 - 2006



	1999	2000	2001	2002	2003	2004	2005	2006
San Luis Obispo County	0.0	0.0	0.0	0.4	0.8	0.80	0.40	1.50
California	0.8	1.0	1.6	3.0	3.6	3.80	4.30	4.90

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 STDs.
- 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 STDs in sexual education classes in schools.
- Suggesting that STD screening be conducted for those deemed to be at risk of contracting and/or spreading STD's.
- Distributing information throughout the community, focusing on those individuals at higher risk of contracting STDs and explaining how to reduce the risk of contracting STDs through use of condoms and monogamy.

Community Resources:

The Economic Opportunity Commission (EOC) Family Planning, Planned Parenthood and the County Public Health Department all offer no cost to low cost birth control and STD information as well as screening for many STDs.

Data Sources:

Data sources for this report include:

- California Department of Health Services, Department of Public Health, Sexually Transmitted Disease Control Branch.
- Healthy People 2010 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 Department of Health and Human Services:

- In 2006, a case rate of 1.2 per 100,000 of hepatitis A was reported in the United States, the lowest ever recorded. Children have the highest rate of HAV infection in the country.
- The estimated number of new hepatitis B infections per year has declined from an average of 260,000 in the 1980s to about 46,000 in 2006. The rate for males is approximately 1.8 times higher than that for females.
- Of the reported cases of acute HBV, it was found after investigation that up to 70% of those people had recently been in a setting where they could have easily been vaccinated for HBV.
- The most common chronic blood born viral disease in the United States is hepatitis C virus (HCV). An estimated 4.1 million (1.6%) of 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 2010 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 4.5 per 100,000 population.
- Reduce hepatitis B infection in adults (aged 19 to 24) to a rate of 2.4 per 100,000 population and in adults (aged 25 to 39) to a rate of 5.1 per 100,000 population.
- Decrease occurrence of hepatitis C to only 1 new (acute) case per 100,000 population.

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. 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 coordinate with the San Luis Obispo County AIDS Program to provide hepatitis C testing in conjunction with the County's State-funded HIV testing program. Since that time, more cases have been identified and reported in the community.

Table 16-1: Reported Cases of Hepatitis

San Luis Obispo County Residents, 1997 - 2007

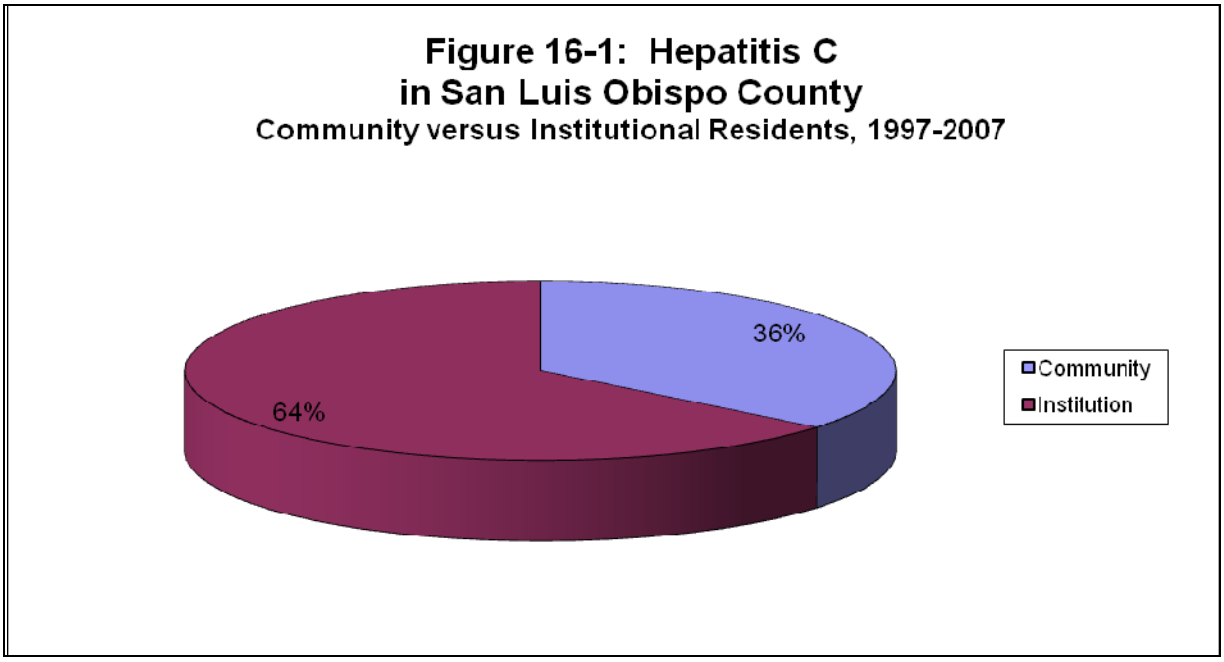
Virus	Number of Cases Reported by Year										
	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007
Hepatitis A	25	9	2	9	3	7	4	4	5	12	5
Hepatitis B (Acute)	2	0	2	0	1	1	1	6	4	3	1
Hepatitis B (Chronic)	15	23	38	32	39	66	36	35	90	69	28
Hepatitis C (Acute)	1	3	3	0	0	1	1	0	1	6	3
Hepatitis C (Chronic)	74	159	208	256	336	1212	605	402	502	452	364

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.

Key Findings (contintued):

- Institutionalized Cases of Hepatitis:
  - The majority (64%) of the 2,853 hepatitis C cases during 1997–2007 were among institutionalized residents, as shown in Figure 16-1.
  - A slight majority (51%) of the 495 hepatitis B (chronic) cases during 1997-2007 were among institutionalized residents.



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. Since 1998, San Luis Obispo County has met the Healthy People 2010 objective of reducing new cases of hepatitis A to no more than 4.5 per 100,000.
- Hepatitis C: Since 2003, hepatitis C rates have remained relatively stable, with Intravenous Drug Use (IDU) as the most commonly identified risk factor for infection. 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 19080s.

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. In 1997, 14 states had laws or regulations to ensure such screening. 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 2010 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.

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 2007, new reported cases of tuberculosis declined.
- 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.
- A person infected with mycobacterium tuberculosis can be a carrier with no symptoms of tuberculosis. This can lead to outbreaks if those who have been in contact with tuberculosis patients are not contacted promptly to receive curative therapy.

National Objective:

The Healthy People 2010 objectives for tuberculosis are:

- Reduce new tuberculosis cases to 1 new case per 100,000 population.
- Increase the percentage of tuberculosis patients to finish curative therapy within 12 months from 74% in 1996 to 90% by 2010.
- Increase the percentage of people with latent tuberculosis infection receiving 12-month therapy from 62% in 1997 to 85% in 2010.
- Reduce the average time for laboratories to confirm and report positive tuberculosis tests from 21 days for 75% of tuberculosis cases in 1996 to 2 days for 75% of cases in 2010.

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 2007.
- 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.
- We have not yet achieved the Healthy People 2010 objective of reducing new tuberculosis cases to 1 new case per 100,000 population.

Primary Prevention Activities:

Primary prevention activities include:

- Comprehensive screening of those most at risk of being infected with/acquiring TB, i.e., incarcerated, foreign born, and homeless persons.
- Ensuring that those infected with mycobacterium tuberculosis receive the complete course of curative therapy to reduce the spread of the disease, the

chance that the infection will be reactivated in the patient at a later date, or breakouts of new drug resistant strains of the disease.

- Increasing the percentage of those with latent tuberculosis to complete the full treatment set so as to reduce the number of individuals actually progressing towards the disease and spreading it to others.
- Decreasing the amount of time that laboratories take to confirm and report positive tuberculosis tests by upgrading lab facilities, properly training lab employees in new technology and increasing general efficiency of these laboratories.

Data Sources: Data sources for this report include:

- California Department of Health Services, Report on Tuberculosis in California, 2006; available at; http://www.cdph.ca.gov/DATA/STATISTICS/Pages/TuberculosisDiseaseData.aspx
- Healthy People 2010 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, 2004, 18th edition, pages 560-572.

Pneumonia and Influenza

Importance:

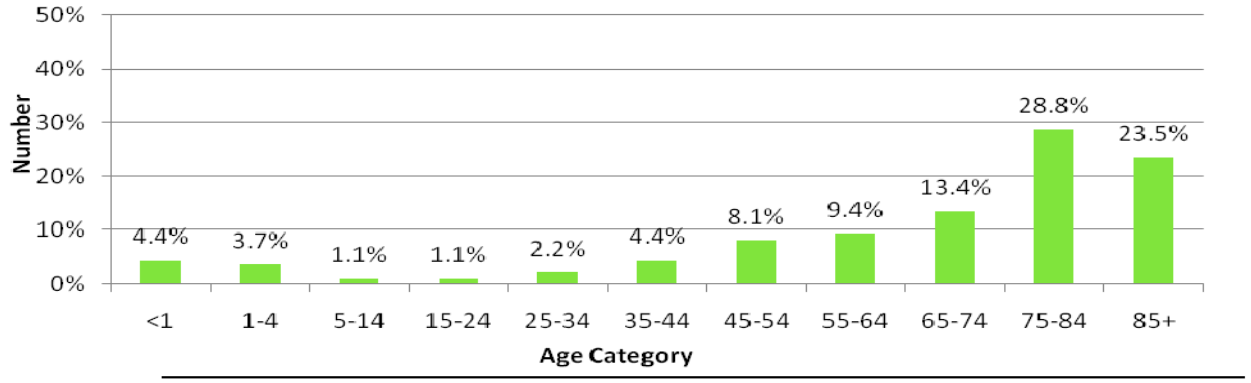
- Pneumonia and influenza (P & I) are important causes of morbidity and mortality in the United States, and together are the eighth leading cause of death in the US. There were an estimated 60,207 deaths in the United States in 2004 due to pneumonia and influenza. It was the sixth leading cause of death in California between 200-2004.
- 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.

Key Findings

Pneumonia and Influenza Hospitalizations

- During 2005, an estimated 62,000 hospital discharges were due to P & I in the US. In SLO County, 721 patients (regardless of their county of residence) were admitted to San Luis Obispo County acute care hospitals with a principal diagnosis of influenza or pneumonia. During this same time, there were an average of 20,502 admissions for all causes; therefore, 3.5% of all hospitalizations were attributed to influenza or pneumonia. As shown in Figure 18-1, the majority (69.7%) of these individuals were 65 years of age or older, while 16.4% were between the ages of 45 and 64, and 5.2% were below the age of 5 years.

Figure 18-1: Influenza and Pneumonia Hospitalizations
Occurrence in San Luis Obispo County (2005)

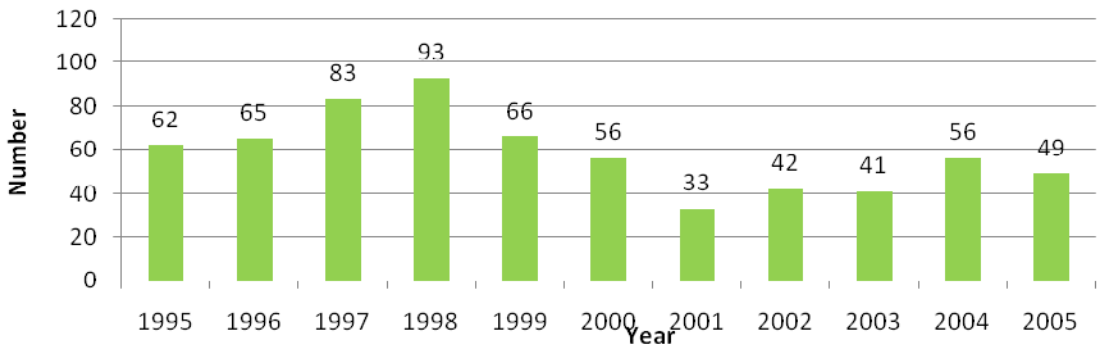


Note: OSHPD masked the age category of 80 pneumonia and flu cases; therefore, this graph includes only 641 cases with available age category data (of the 721 total cases).

Pneumonia and Influenza Deaths

- During 2003-2004, an average of 49 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 2,037 deaths due to all causes occurred per year; therefore, 2.4% of all deaths were attributed to influenza or pneumonia. The actual number of deaths from influenza or pneumonia per year ranged from 33 to 93, as shown in Figure 18-2.

Figure 18-2: Influenza and Pneumonia Deaths
San Luis Obispo County Residents (1995 - 2005)



Data source: 1995-2005: Public Health Information System (PHIS) Vital Statistics data from the California Department of Health Services.

- Between 1995-2005, 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 ~6% were between the ages of 45 and 64. The percentage below the age of 5 years was 0.5%. The mortality by age group is shown in Figure 18-3.

Figure 18-3: Influenza and Pneumonia Deaths by Age
San Luis Obispo County 1995 - 2005

Data source: 1995-2004: Public Health Information System (PHIS) Vital Statistics data from the California Department of Health Services. Influenza and pneumonia International Classification of Disease Codes = ICD 9 codes 480.0 through 487.8 (1993 1998) and ICD-10 codes J10-J18 (1999 +).

National Objectives:

Healthy People 2010 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 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 the following groups:

- Persons at high risk for influenza-related complications and severe disease, including:
  - Children aged 6 – 59 months,
  - Pregnant women,
  - Persons aged ≥ 50 years,
  - Persons of any age with certain chronic medical conditions; and
- Persons who live with or care for persons at high risk, including:
  - Household contacts who have frequent contact with persons at high risk and who can transmit influenza to those persons at high risk, and
  - Health-care workers

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
- American Lung Association
- California Department of Public Health, Center for Health Statistics: Public Health Information System, Vital Statistics Data.
- California Office of Statewide Health Planning and Development, Hospital Discharge Data.
- Healthy People 2010 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.

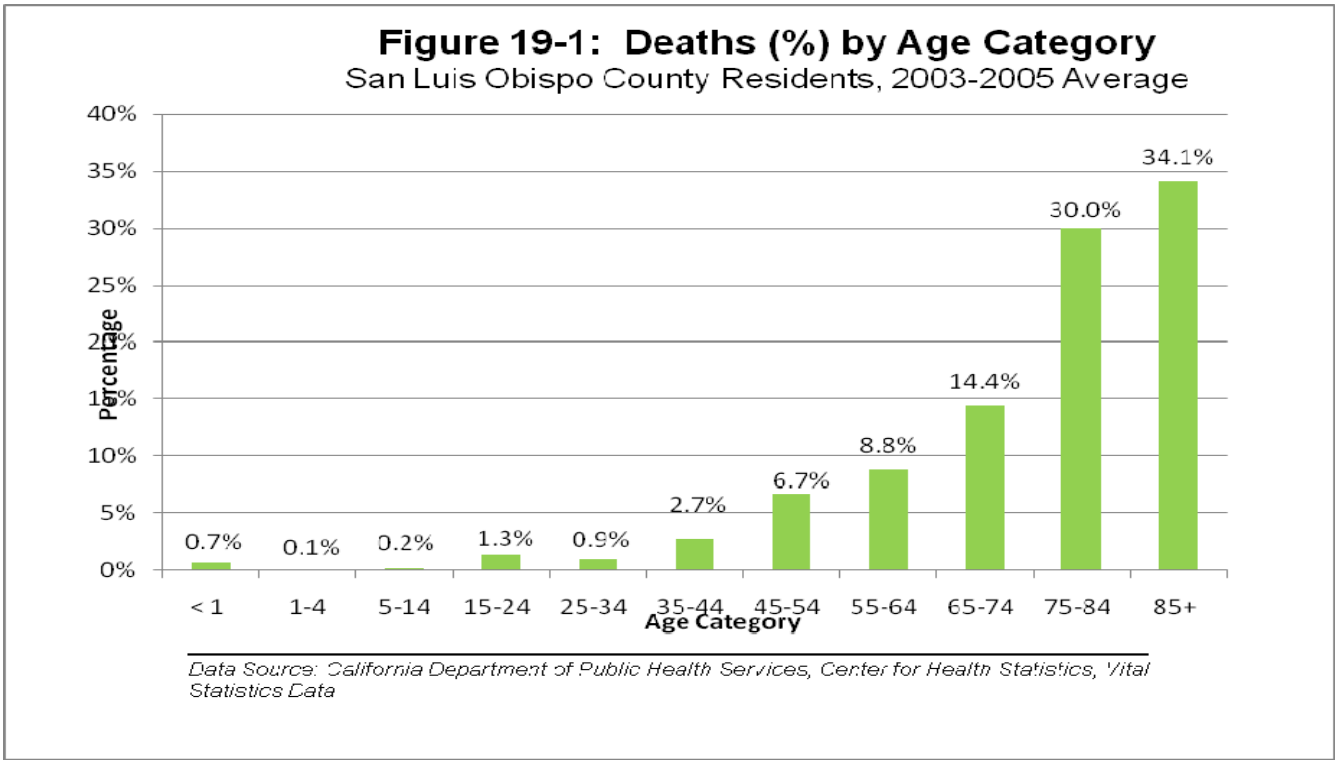
The 2005 leading causes of death among San Luis Obispo County residents are shown in Table 19-1. Almost two-thirds, 58.8%, of the 2005 deaths were due to the three leading causes: heart diseases, cancer, and strokes. In 2005, there were a large number of unintentional injury deaths in San Luis Obispo County.

Table 19-1:
Leading Causes of Death for San Luis Obispo County Residents,
Average Number and Percent of Deaths per Year (2005)

Diagnostic Category	Female		Male		All Residents	
	N	Percent	N	Percent	N	Percent
Malignant neoplasms (cancer)	251	23.63 %	258	25.54 %	509	24.57%
Diseases of the heart	207	19.49 %	233	23.07 %	440	21.24%
Unintentional injury deaths	59	5.56%	89	8.81 %	148	7.14%
Chronic lower respiratory diseases	62	5.84%	58	5.74 %	120	5.79%
Cerebrovascular disease (stroke)	60	5.65%	53	5.25 %	113	5.45%
Dementia/Alzheimer's disease	73	6.87%	29	2.87 %	102	4.92%
Diabetes mellitus	35	3.30%	26	2.57 %	61	2.94%
Pneumonia and influenza	25	2.35%	21	2.08 %	46	2.22%
Suicides	6	0.56%	23	2.28 %	29	1.40%
Chronic liver disease / cirrhosis	11	1.04%	13	1.29 %	24	1.16%
All other causes of death	273	25.71 %	207	20.50 %	480	23.17%
Total	**1,062**	**100%**	**1,010**	**100%**	**2,072**	**100%**

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

Deaths by Age Category: As shown in Figure 19-1, the majority of San Luis Obispo residents (78.5%) who died between 2003 and 2005 were 65 years of age and older. Of the infants less than 1 year of age who died in 2005, 72% died of chromosomal defects or other conditions arising in the perinatal period.



National Objectives: The Healthy People 2010 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 3.0 per 100,000 population), or Alzheimer's disease deaths.

- Reduce coronary heart disease deaths to 166 per 100,000 population
- Reduce overall cancer deaths to 159.9 per 100,000 population
  - Reduce lung cancer deaths to 44.9 per 100,000 population
  - Reduce breast cancer deaths to 22.3 per 100,000 population
- Reduce cerebrovascular disease deaths to 48 per 100,000 population
- Reduce unintentional injury deaths to 17.5 per 100,000 population
- Reduce diabetes death rate to 45 per 100,000 population
- Reduce suicide deaths to 5.0 per 100,000 population

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.

Table 19-2: Leading Cause of Death Rates
California Vs. San Luis Obispo County, 2003-2005 Average

	Age-Adjusted Death Rate per 100,000 Population	
	California	**San Luis Obispo County**
1. Coronary heart disease	163.1	121.6
2. Deaths from all cancers	165.1	158.8
• Lung cancer	41.5	44.4
• Female breast cancer	22.7	20.9
3. Cerebrovascular disease (stroke)	51.7	47.3
4. Chronic Lower Respiratory Disease	40.7	39.0
5. Unintentional injuries*	30.0	35.3
6. Pneumonia and influenza	23.8	14.5
7. Diabetes	22.3	15.9
8. Alzheimer's disease	22.1	23.4
9. Chronic liver disease / cirrhosis	10.8	8.9
10. Suicide	9.3	11.3
All Causes of Death	716.7	646.1

* 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.

Data Sources: California Department of Public Health Center for Health Statistics. All data are an average for 2003-2005

Summary:

- The San Luis Obispo County 2003-2005 average age-adjusted death rate of 646.1 per 100,000 for all causes of death was lower than the rate for the State of California (716.7).
- The San Luis Obispo County 2003-2005 average age-adjusted death rates for the top three causes of death (coronary heart disease, cancer, and cerebrovascular disease) were lower compared to the State of California.
- The San Luis Obispo County 2003-2005 age-adjusted death rates for chronic lower respiratory disease, pneumonia and influenza, diabetes, and chronic liver disease / cirrhosis were lower compared to the State of California.
- The 2003-2005 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 2010 Objectives, U.S. Dept. of Health and Human Services, Office of Public Health and Science.

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. Examples of the most common chronic diseases and a brief definition of each include:

- **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 and 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.
- **Cirrhosis and Other Chronic Liver Diseases** refer to four major categories of liver disease: alcoholic fatty liver, hepatitis, cirrhosis, and other or unspecified forms of liver disease.
- **Arthritis and Other Musculoskeletal Diseases** refer to more than 100 diseases, most of which are uncommon and are of unknown cause. 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 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).
- **Chronic Neurological Disorders** refer to a variety of disorders. The most common of these and a brief description are summarized in Table 20-1.

Table 20-1: Types of Chronic Neurological Disorders

Category	Disorder	Description
Classic neurological diseases		
Dementia	Alzheimer's disease	Principle dementia disorder of adults, with symptoms of progressive loss of memory and other cognitive functions.
	Multi-infarct dementia	Stepwise progression of cognitive loss punctuated by multiple episodes of stroke-like events.
Neurodegenerative disorders	Parkinson's disease	Gradually progressive course characterized by rhythmical resting tremor, muscular rigidity, postural instability, and slowness in the initiation and execution of movement.
	Amyotrophic lateral sclerosis (also known as Lou Gehrig's disease)	Fatal motor neuron disease that causes rapidly progressive muscle weakness and death within 2 to 3 years of onset.
Neuro-immunologic disorders	Multiple sclerosis	Characterized by plaques or lesions of the myelin sheath. Symptoms may include impaired vision, weakness, tremor, disturbances of sensation, and bowel or bladder difficulties.
	Guillain-Barre syndrome	Nonspecific immune response directed at peripheral nerves; characterized by muscle weakness that often progresses over days or weeks but is reversed in majority of patients.
Unintentional injuries		
	Brain injury	Mild brain injuries result from concussion of the brain, are usually associated with some period of loss of consciousness or amnesia for the event. Severe brain injuries result from contusion or hemorrhage and are often associated with neurological and cognitive deficits that may cause severe, permanent impairment.
	Spinal cord injury	Spinal cord injuries result in varying degrees of paresis or paralysis, depending on the region of the spinal cord injured.
	Carpal tunnel syndrome	Entrapment of the median nerve in the wrist…clinical hallmarks include tingling or burning pain in the affected hand, and an abnormal delay in median nerve conduction at the wrist.
	Low-back injury	Most low back pain is attributable to muscular sprain, strain, or spasm; ligamentous injury; or abnormalities of the vertebral bones, discs, or facet joints.
Intermittent disorders		
	Epilepsy	Epilepsy is the repeated occurrence of seizures in patients who have not been provoked to have such seizures.
	Headache	Two principal headache types are migraine, or vascular headaches, and muscle contraction headaches. There are no uniform case definitions for headache types/classifications.

Source: Chronic Disease Epidemiological Control, American Public Health Association, 1993.

Importance: According to the American Public Health Association:

- **Chronic diseases** are the leading causes of death.
- **Heart disease, cancer, and cerebrovascular diseases (stroke)** account for nearly two-thirds of all deaths.
- **Chronic Obstructive Pulmonary Disease (COPD)** occurs most often in older people. As much as 10 percent of the population aged 65 years and older is estimated to have 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 $763 million in hospitalization costs alone in California in 2005. Yet most of the problems caused by asthma could be averted if persons with asthma and their health care providers managed the disease according to established guidelines.
- **Diabetes** prevalence has increased steadily over the past decade; in 2005, 14.6 million persons have been diagnosed with diabetes, while 6.2 million persons are estimated to have the disease but are undiagnosed. 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 (approximately 82,000 in 2002); blindness among working-aged adults (approximately 12,000 to 24,000 new cases each year); and end-stage renal disease (ESRD) (approximately 44,400 people with diabetes began treatment in 2002 for ESRD).
- **Cirrhosis**, caused primarily by sustained heavy alcohol consumption, is one of the 10 leading causes of death in the United States. Cirrhosis occurs when healthy liver tissue is replaced with scarred tissue until the liver is unable to function effectively. Higher State excise tax rates on distilled spirits are associated with lower death rates from cirrhosis.
- **Arthritis** is the leading cause of disability. Arthritis limits the major activities of between 3.4% and 15% of adults in the 18-64 years age group, including nearly 1 out of every 5 persons with arthritis.
- **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 reisk 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 2010 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.
- Chronic disease prevalence data for San Luis Obispo County has been limited until 2001, when the California Health Interview Survey (CHIS), a collaboration of the UCLA Center for Health Policy Research, the California Department of Health Services, and the Public Health Institute, released the results of its 2001 survey. CHIS is a random-digit dial telephone survey of representative households from counties in California. Many CHIS questions are adapted from the National Health Interview Survey, other national and state surveys, and individual research projects that focus on population health.
- 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, 2005

Geographic Region	Ever Diagnosed with Heart Disease	95% Confidence Interval
San Luis Obispo County	**6.4%**	4.2-8.7
California	**6.2%**	5.9-6.5

Data Source: 2005 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. Neither California nor San Luis Obispo County have met the Healthy People 2010 objective for diabetes prevalence of no more than 2.5 cases per 100 adult population. However, only five counties and one region have significantly lower rates than the state, and SLO County is one of them according to L.E. Lund's report "Prevalence of Diabetes in California Counties, 2003 Update."
- The prevalence of diabetes among children (ages 0 to 17 years) in California was 0.8 per 100 state population. San Luis Obispo County had below the minimum required for reporting.

Table 20-3: Percentage of persons with Diabetes
San Luis Obispo County and California, 2005

Geographic Region	Ever Diagnosed with Diabetes	95% Confidence Interval
San Luis Obispo County	**4.7**	2.9 - 6.4
California	**7.0**	6.6 - 7.3

* Percentage of persons who reported being diagnosed with diabetes by a physician at any time.

- As shown in Table 20-4, San Luis Obispo County had a higher percentage of persons reporting diagnosis with arthritis compared to others in California.

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, Department of 2001 California Health Interview Survey, UCLA Center for Health Policy Research, AskCHIS Query, 2006.]

- As shown in Table 20-5, San Luis Obispo County had a higher percentage of adults reporting diagnosis with asthma compared to others in California.

Table 20-5: Asthma* Prevalence
San Luis Obispo County vs. California, 2005

Geographic Region	**Children** (Ages 0-17)	**Adults** (Ages 18+)	**All Ages**
	Percent (90% Confidence Interval)		
San Luis Obispo County	**22.8** (14 – 31.5)	**18.0** (13.5 – 22.5)	**19.0** (15.0 – 23.0)
California	**16.1** (15.2 – 17.1)	**12.7** (12.3 – 13.2)	**13.6** (13.2 – 14.0)

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

Data Source: California Health Interview Survey 2003: UCLA Center for Health Policy Research, 2006.

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. According to the Institute for Health and Aging, the estimated number of persons with chronic conditions and corresponding direct medical cost estimates:

- 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 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.

Tobacco Use

Definitions:

About 438,000 deaths in the United States each year can be attributed to cigarette smoking. In 2006, from data in the National Health Interview Survey (NHIS), the CDC estimated that 20.8% of adults in the U.S. were current cigarette smokers. Since 1964, 29 Surgeon General's 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 in 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. certain activities or who have certain characteristics that increase their potential for contracting an illness, injury, or health problem.

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 combine with high blood pressure and poor nutrition – are 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, 2004):

- Smoking alone contributes to one out of every five deaths in the United States.
- Complications from secondhand smoke:
  - 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 never smokers.

National Objectives: The Healthy People 2010 objective is to reduce the prevalence of cigarette smoking among adults to ≤12%.

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

Table 21-2C: Tobacco Use

Healthy People 2010 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 2010*	**20.8 percent** of adults aged 18 years and older smoked cigarettes in 2006 (age adjusted to the year 2000 standard population) *Data source: National Health Interview Survey (NHIS), CDC, NCHS*	**11.7 percent** of residents smoked cigarettes every day or some days, a decline from 13.4% in 2003 and 16.3% in 1999. *Data source: Action for Healthy Communities, 2006* **14.4 percent** of adults indicated they were current smokers in 2005, down from 16.0 percent of adults in 2003. *Data source: 2005 California Health Interview Survey (CHIS), UCLA Center for Health Policy Research*
Reduce tobacco use (cigarettes) by students (in Grades 9 through 12) to **16 percent**. *Source: Healthy People 2010*	**35** percent of adolescents (in Grades 9 through 12) used cigarettes in past 30 days. *Data source: Youth Risk Behavior Surveillance System (YRBSS), CDC, NCCDPHP 2005*	**5.2 percent** of teens in San Luis Obispo County reported smoking regularly, with **3.8 percent** of teens reporting having started smoking at 11 years or younger. *Data source: 2005 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 2003 was: **- 3 percent** in Grade 7 **- 13 percent** in Grade 9 **- 24 percent** in Grade 11 *Data source: California Healthy Kids Survey, Fall 2003*

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*. 2007.

http://www.cdc.gov/tobacco/basic_information/00_pdfs/AAGTobacco2007.pdf

- American Public Health Assoc., Chronic Disease Epidemiological Control, 1993.
- Healthy People 2010 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, 2003 & 2005 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.

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:

As a nation, in the past 30 years, the prevalence of overweight and obesity has increased sharply for both adults and children. More than one-third of U.S. adults – over 72 million people – were obese in 2005-2006. The prevalence of overweight Californians has increased from 38 percent in 1984 to 56 percent in 2005. Poor diet and physical inactivity are the second leading causes of death and disability, resulting in nearly 30,000 deaths each year in California.

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 estimated total costs of obesity were projected to rise to $28 billion in 2005. 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 neatly $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 Objective:

The Healthy People national objectives for 2010 (HP 2010) include:

- Increase the proportion of adults who are at a healthy weight to 60%.
- Reduce the proportion of adults are are obese to 15%
- Reducing the proportion of children and adolescents who are overweight or obese to 5%.

Although Healthy People 2010 does not have specific goals for physical activity, the CDC recommends that adults do one of the following:

- A minimum of 30 minutes of moderate-intensity physical activity per day(such as brisk walking) most days of the week

or

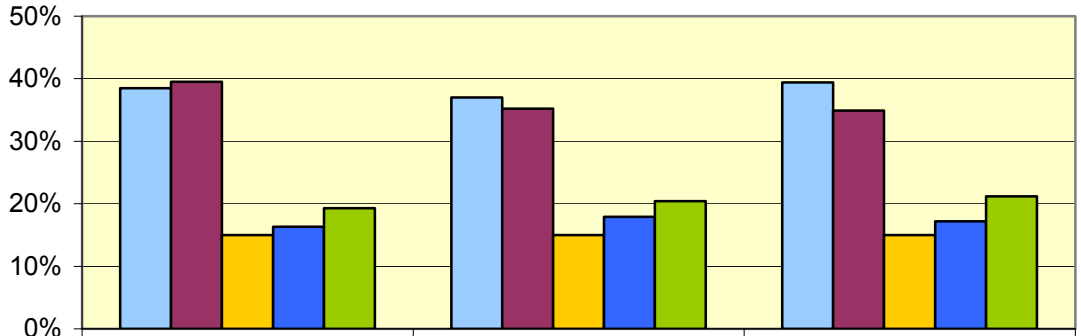
- A minimum of 20 minutes of viforous-intensity physical activity (such as jogging or running) 3 days a week.

Key Findings:

The percentage of overweight adults in San Luis Obispo County (56.6%) has surpased that of California as of 2005. In 2005, the proportion of normal weight individuals for San Luis Obispo County and California, was 42.0% and 41.7% respectively. Both SLO County and the State need to make some major changes

before they will meet the Healthy People 2010 objectives.

Figure 22-1. Percentage of Residents that are in each category, San Luis Obispo, California and HP 2010 objective, 2001-2005



	2001	2003	2005
SLO - overweight	38.5%	37.0%	39.4%
CA - overweight	39.5%	35.2%	34.9%
HP 2010 - obese	15.0%	15.0%	15.0%
SLO - obese	16.3%	17.9%	17.2%
CA - obese	19.3%	20.4%	21.2%

Source: 2005 California Health Interview Survey (CHIS), UCLA Center for Health policay Research

In 2005, 7.9% of San Luis Obispo County teenagers (age 12-17) were deemed overweight or obese compared to 14.2% across the entire State. The percentage seemed to have declined in 2003, but is back on the rise for 2005 (see Figure 22-2). Neither SLO County nor California are meeting the HP 2010 objectives. (Note: SLO County teenage data is statistically unstable).

Between 1999 and 2006, the percentage of persons reporting engaging in some form of regular physical exercise at least three days a week decreased from 72.8% to 71.8%. However, during the same period, the percentage of people taking part in some form of exercise 1-2 days a week increased from 13.1% to 27.1%. (Data Source: *ACTION for Health Communities 2006)*

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 2010 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, 2005 California Health Interview Survey; AskCHIS Query, http://www.chis.ucla.edu

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 Department of Health and Human Services:

- 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.
- More persons aged 1 to 34 years die as a result of unintentional injuries than any other cause of death. Unintentional injury is the fifth leading cause of death in the United States.
- Motor vehicle crashes are the leading cause of death among children in the United States, and account for approximately half the deaths from unintentional injuries; other unintentional injuries rank second, and falls rank third, followed by poisonings (which includes drug and alcohol overdoses), suffocations, and drownings.

National Objectives:

Unintentional Injury Hospitalizations: A Healthy People 2010 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 unintentional injuries per 100,000 population are:

- Year 2000: 29.3
- Year 2010: 17.5

Motor Vehicle Deaths: Reduce deaths caused by motor vehicle crashes to no more than 9.2 per 100,000 population.

Key Finding:

Unintentional Injury Hospitalizations: Table 23-1 shows a summary of the 2005 number of hospital discharges due to unintentional injuries among San Luis Obispo County residents. More than half (55.4%) of the 1,580 nonfatal injuries (resulting in hospitalization) in San Luis Obispo County in 2005 were due to falls, compared to the state percentage of 50.5%. San Luis Obispo County has a higher percentage of elderly compared to the state, so the difference is not surprising, since most falls occur among the elderly population. Approximately 12.5% of the unintentional nonfatal injuries in San Luis Obispo County in 2005 were due to motor vehicle accidents, compared to 16.2% for the state. Among those ages 65 and older, the most common type of nonfatal unintentional injury was falls (74.6%).

Table 23-1: Nonfatal Hospitalized Unintentional Injuries

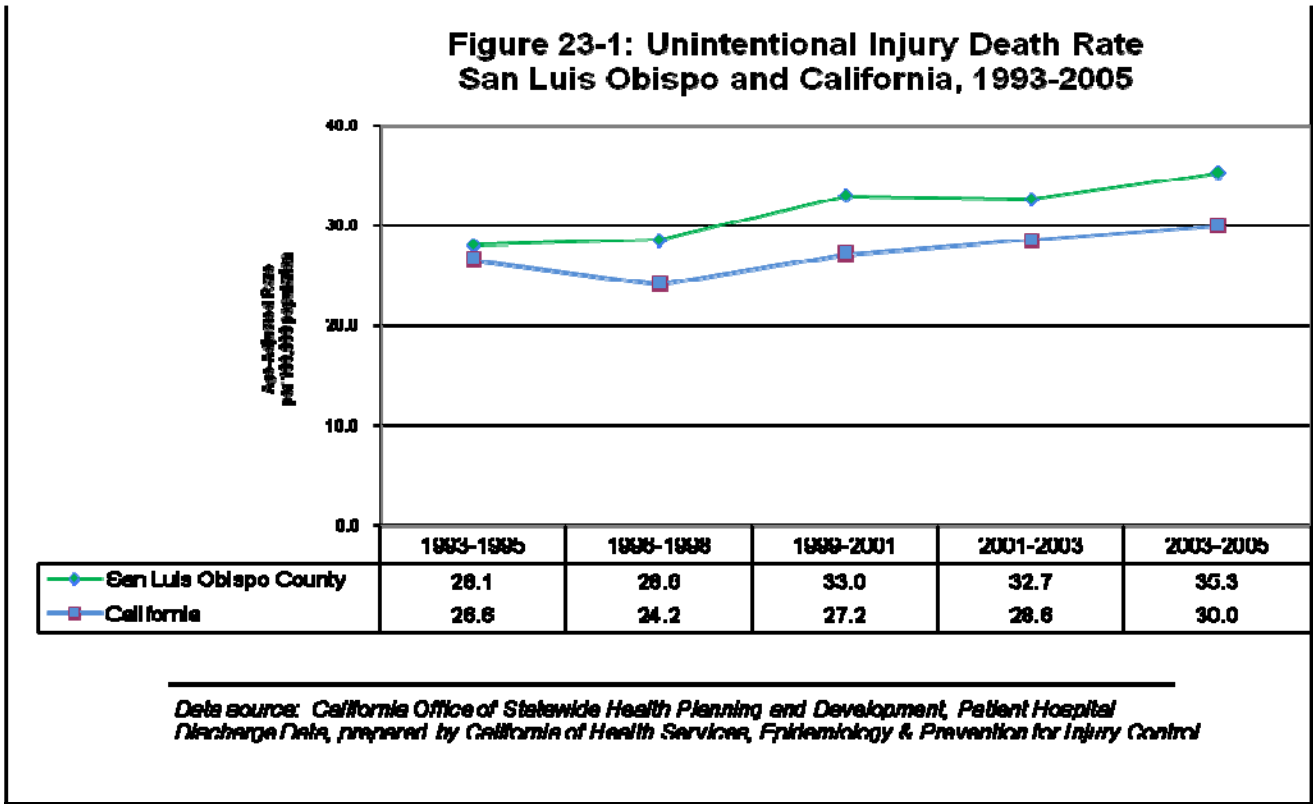
San Luis Obispo County Residents, 2005

Unintentional Injury Type	Number (Percent)	
	All Ages	**65 and Older**
Fall	876 (55.4%)	604 (74.6%)
Motor vehicle accident	198 (12.5%)	27 (3.3%)
Poisoning (includes drug/alcohol)	98 (6.2%)	29 (3.6%)
Transport (other than motor vehicles or bicycles)	59 (3.7%)	7(0.9%)
Natural/Environmental	48 (3.0%)	11 (1.4%)
Overexertion	41 (2.6%)	14 (1.7%)
Bicyclist (other than with motor vehicle)	24 (1.5%)	1 (0.1%)
Cut/Pierce	10(0.6%)	1 (0.1%)
Fire/Burn	13 (0.8%)	4 (0.5%)
Machinery	11 (0.7%)	0 (0%)
Drowning/Submersion	2 (0.1%)	0 (0%)
Struck by Object	44(2.8%)	10(1.2%)
Firearms (not homicide or suicide)	4 (0.3%)	0 (0%)
Other	134 (9.6%)	60 (12.6%)
Total	1,580 (100%)	810 (100%)

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 35.3 deaths per 100,000 population caused by unintentional injuries in during 2003-2005, compared to 30 for California. The trends in unintentional injury death for San Luis Obispo County have mirrored that of the state. San Luis Obispo ranked 20th among the 58 California counties (i.e., 19 counties had a lower death rate due to unintentional injuries). Neither California nor San Luis Obispo County meet the Healthy People 2010 national objective for unintentional injury deaths.



A summary of the 2003-2005 San Luis Obispo County deaths due to unintentional injuries by type of injury is presented in Table 23-2. Key findings include:

- The majority (79.8%) of unintentional injury deaths were due to motor vehicle accidents, poisonings, and falls.
- The majority (63.1%) of unintentional injury deaths were of males.
- The majority (63%) 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, 2003-2005 (Average)

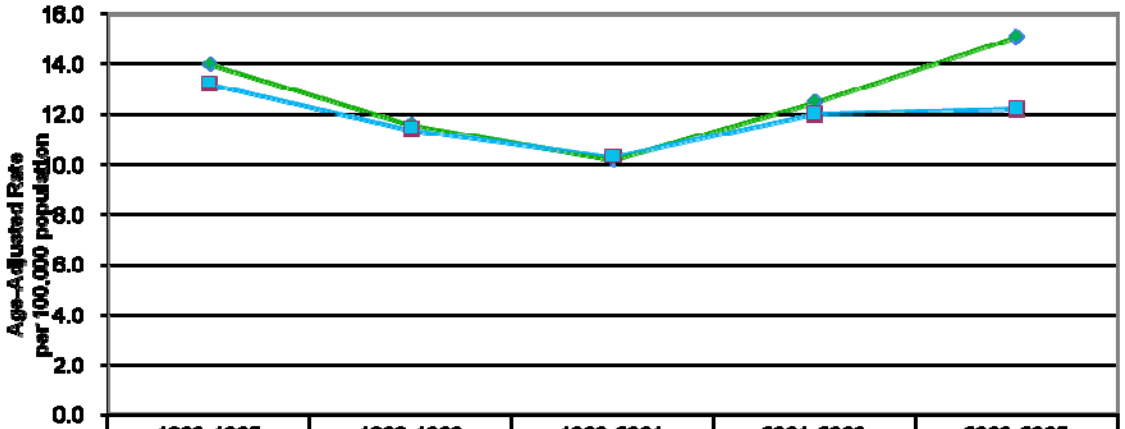
Unintentional Injury Type	Number (Percent)		
	Males	**Females**	**All**
Motor vehicle accidents	25 (40.1%)	14.7 (40.4%)	39.6 (40.1%)
Poisonings (includes drug/alcohol)	13 (20.9%)	6.7 (18.3%)	19.6 (19.9%)
Falls	12.3 (19.8%)	7.3 (20.2%)	19.6 (19.9%)
Fires	2.0 (3.2%)	1.0 (2.8%)	3 (3.0%)
Transport - Other	1.7 (2.7%)	1.3 (3.7%)	3 (3.0%)
Suffocation	2.3 (3.7%)	0.7 (1.8%)	3 (3.0%)
Other	6.0 (9.6%)	4.7 (12.8%)	10.7 (10.8%)
Total	**62.3** (100%)	**36.3** (100%)	**98.7** (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 15.1 deaths per 100,000 population caused by motor vehicle crashes (2003-2005 average), compared to 12.2 for California. San Luis Obispo ranked 18th among the 58 California counties (i.e., 17 counties had a lower death rate due to motor vehicle crashes). Neither California nor San Luis Obispo County met the Healthy People 2010 national objective of 9.2 deaths per 100,000 population.

Figure 23-2: Motor Vehicle Crash Death Rate
San Luis Obispo County and California, 1993-2005



	1993-1995	1996-1998	1999-2001	2001-2003	2003-2005
San Luis Obispo County	14.0	11.6	10.2	12.5	15.1
California	13.2	11.4	10.3	12.0	12.2

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)

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.

Cost Analysis:

Although the greatest impact of injury is in human suffering and loss of life, the financial cost is also staggering, per the Department of Health and Human Services. Included in the costs associated with injuries are the costs of direct medical care and rehabilitation as well as lost income and productivity. By the late 1990s, injury costs were estimated at more than $441 billion annually, an increase of 42 percent over the 1980s. As with other health problems, it costs far less to prevent injuries than to treat them. For example:

- Every child safety seat saves $85 in direct medical costs and an additional $1,275 in other costs.
- Every bicycle helmet saves $395 in direct medical costs and other costs.
- Every smoke detector saves $35 in direct medical costs and an additional $865 in other costs.
- Every dollar spent on poison control centers saves $6.50 in medical costs.

Costs for unintentional injuries:

According to the National Center for Injury Prevention and Control 2000 report on unintentional injuries:

- The 50 million fatal and non-fatal injuries in 2000 that required medical treatment cost approximately $406 billion, a combination $80.3 billion in medical costs and $326 billion in lost productivity costs.
- 70% of total lifetime injury costs ($283 billion) can be attributed to males.
- Motor vehicle injuries account for 22% ($89 billion) of total lifetime injury costs.
- Fall injuries account for 20% ($81 billion) of lifetime injury costs.
- Persons between the ages of 25 and 44 years of age represent 30% of the U.S. population and 40% ($164 billion) of total lifetime injury costs.

Data Sources:

Data sources for this report include:

- Healthy People 2010 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 is the eleventh leading cause of death in the United States. More than 32,000 suicides occurred in the U.S. in 2005. This is the equivalent of 89 suicides per day.
- Between 1952 and 1995, the incidence of suicide among adolescents and young adults nearly tripled.
- 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.
- The majority (61%) of all suicides involve firearms.
- Males are four times more likely to die from suicide than are females. However, females are more likely to attempt suicide than are males.
- Suicide rates among the elderly are highest for those who are divorced or widowed; key risk factors include depression and social isolation. In the month prior to suicide, 75% of elderly persons had visited a physician.
- 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:

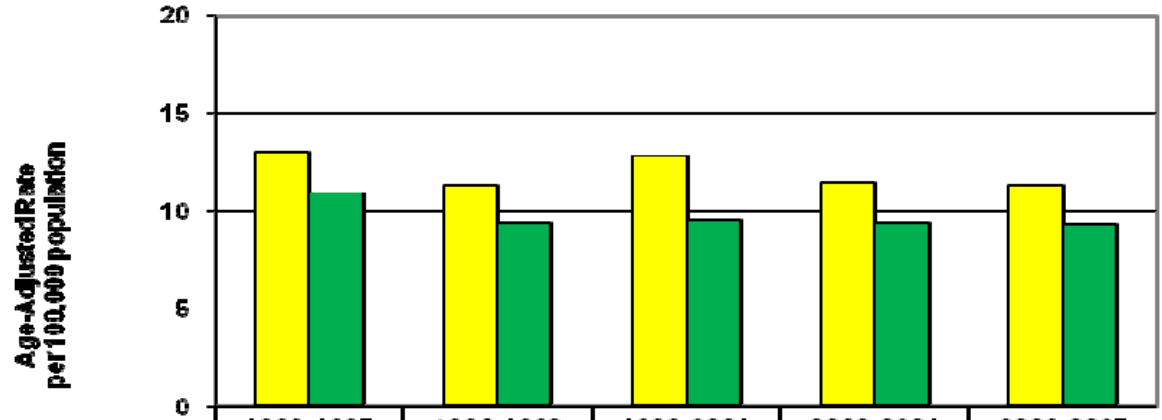
The Healthy People 2010 national objective for suicide deaths is to reduce the age adjusted death rate due to only 4.8 suicides per 100,000 population.

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 2003-2005, San Luis Obispo ranked 29th out of 58 counties (i.e., 28 counties had a lower suicide death rate than San Luis Obispo) compared to 37th from 2001-2003. Neither San Luis Obispo County nor the state met the 2010 Healthy People national objective of 4.8 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 (53.0%), followed by hanging/strangulation/suffocation (25.3%) and self-poisoning (15.6%).
- Nonfatal Suicide Attempts: As shown in Table 24-2, the majority of hospitalized, nonfatal suicide attempts among San Luis Obispo County residents in 2005 were among 45-55 years olds. These are age-specific rates.

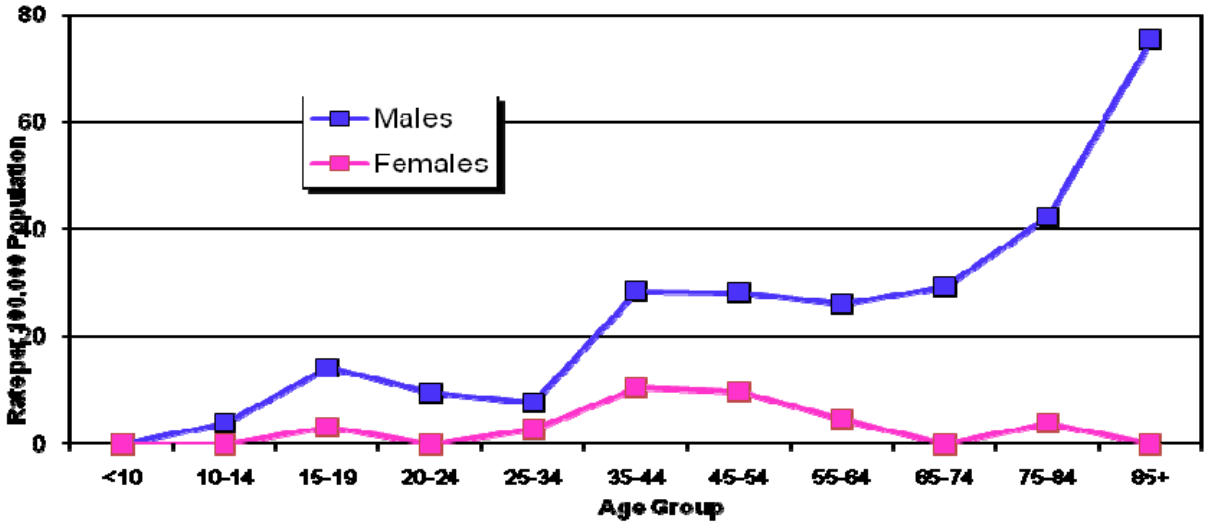
Figure 24-1: Age Adjusted Suicide Death Rate Among Residents
San Luis Obispo and California, 1993-2005



	1993-1995	1996-1998	1999-2001	2002-2004	2003-2005
San Luis Obispo County	13.0	11.3	12.8	11.4	11.3
California	10.9	9.4	9.5	9.4	9.3

Data source: California Dept. of Health Services, Center for Health Statistics, County Health Status Profiles, 2007.

Figure 24-2: Suicide Death Rate by Age Group and Sex
San Luis Obispo County, 2003-2005 (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

Table 24-1: Suicide Death Methods
San Luis Obispo County Residents, 2000-2005

Method of Suicide	Number (N)	Percent (%)
Firearms	105	53.0%
Self-poisoning (drugs or other solids, liquids, or gases/vapors)	31	15.6%
Hanging, strangulation or suffocation	50	25.3%
All other methods*	12	6.1%
Total	198	100%

** All others 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

Table 24-2: Age-Specific Rates of Hospital Discharges With a Primary Diagnosis of Attempted Suicide
San Luis Obispo County Residents, 2005

Age	15-19	20-24	25-34	35-44	45-54	55-64	65-74	Over 75
Rate	13.7	0	23.8	23.4	32.1	7.2	0	5.2

Data Source: California Office of Statewide Health Planning and Development, Patient Discharge Dataset (data abstracted by Epidemiologist).
Population data source: State of California, Department of Finance, Race/Ethnic Population with Age and Sex Detail, 2000–2050. Sacramento, CA, May 2004.

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 2010 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
- 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