



Healthy People 2010

A 2003 PROFILE OF HEALTH STATUS IN THE CENTRAL SAN JOAQUIN VALLEY

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Central California Center for Health and Human Services
College of Health and Human Services
California State University, Fresno

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THE CENTRAL CALIFORNIA CENTER FOR HEALTH AND HUMAN SERVICES

The mission of the Central California Center for Health and Human Services (the Center hereafter) is to conduct research, training and other activities that contribute to the process of improving the health and welfare of communities located within the central region of California. The Center was established in 1996 to facilitate campus-community collaboration, and to bring together professionals, agencies and organizations to address acute and chronic health conditions of the region.

Under the leadership of Dr. Kathleen A. Curtis and Dr. Benjamin Cuellar, Dean of the College of Health and Human Services, the Center administers a variety of externally funded, multidisciplinary research and training programs including the Central Valley Health Policy Institute, the Central California Public Health Training Academy, the Allied Health Academy Project, the Children's Institute, the Disabilities Studies Institute, the Central California Child Welfare Training Academy, the Central California Social Welfare Training Academy, the Specialized Foster Parent Training Program, the Nutrition Network, and the Central California Public Health Partnership.

The Center has considerable experience in facilitating strategic planning, providing organizational support, and garnering and managing external funding. The California State University, Fresno Foundation, serves as the fiscal agent for the Center.

THE CENTER ON-LINE

Additional information about the Center's programs and activities, including this report, health related calendar, and academic as well as community resources may be found at: <http://www.csufresno.edu/ccchhs>

ABOUT THIS REPORT

Healthy People 2010 is a national initiative designed to guide the nation's priorities of improving the health status of the US population and decreasing health disparities among ethnic groups. The two primary goals of Healthy People 2010 are delineated in 28 content areas and specified in 467 measurable objectives. Ten leading health indicators reflect the major public health concerns in the US.

The purpose of this report is to explore the health status of the residents of the Central San Joaquin Valley counties of Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare using the 10 Leading Health Indicators found in Healthy People 2010. This report utilizes tables, graphics, and GIS mapping to show and document key health issues. This data will provide a baseline for the current status of populations in the Central San Joaquin Valley counties and identify areas in need of improvement. It is expected that this report will be updated periodically until the year 2010.

DATA SOURCES

Primary data sources for this report include:

California Department of Health and Human Services
<http://www.dhs.cahwnet.gov>

California Health Interview Survey (CHIS) - AskCHIS
<http://www.healthpolicy.ucla.edu>

California Tobacco Survey
<http://ssdc.ucsd.edu>

Centers for Disease Control and Prevention (CDC)
<http://www.cdc.gov>

RAND California statistics
<http://ca.rand.org/cgi-bin/homepage.cgi>

US Census Bureau
<http://www.census.gov>

US Department of Health and Human Services
<http://www.healthypeople.gov>

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THE CENTRAL CALIFORNIA REGION

Demographic Characteristics

The Central San Joaquin, an area encompassing 27,493 square miles, is home to one of the fastest growing population groups in the State of California (Figure 1). According to US Census Bureau statistics, the region had a population of 2,292,197 in 2000 (US Census Bureau, 2000), exceeding that of 17 states plus the District of Columbia (see Figure 2).

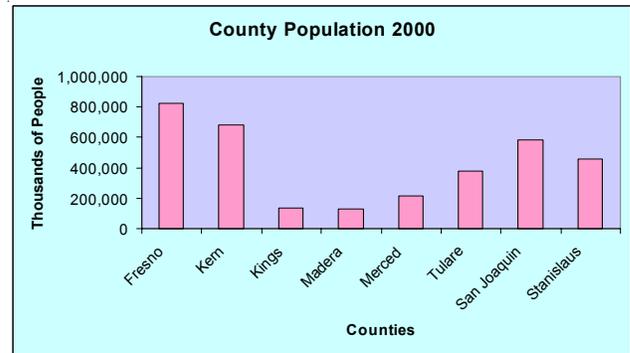
This rapidly expanding population is expected to reach 2,923,200 in 2010 (a 27.5% increase over 2000) and 3,544,700 by 2020 (a 54.6% increase over 2000). This population growth is expected to surpass the expected state population increase for California (17% by the year 2010 and 33% by 2020). The increasing population in the region is fueled by immigration from Mexico, Southeast Asia and Central America (California Department of Finance, 2000).

Figure 1



The region is characterized by its agricultural base and is often referred to as the “bread basket” of California due to the abundant agricultural products harvested in the region including milk, grapes, poultry, almonds, cotton, cattle and calves. The Central San Joaquin Valley population includes large populations of low-income laborers, primarily Hispanic, who are often transient and follow the crops and harvest from town to town. Additionally, the Central San Joaquin Valley has the largest concentration of Laotian and Hmong refugees in the United States.

Figure 2



Source: Umbach, 2002

In addition to being one of the largest rural and agricultural areas in the nation, the region is one of the most culturally diverse in the State of California. According to the 2000 US Census Bureau, Central San Joaquin Valley residents represent over 70 ethnicities and speak approximately 105 languages. The demographic characteristics of the region are summarized in Table 1.

The Central San Joaquin Valley houses some large urban areas. The City of Fresno, in Fresno County, has a population of 427,652 and is ranked the sixth most populous city in the state. Bakersfield in Kern County has a population of 247,057 (US Census Bureau, 2000).

	Fresno	Kern	Kings	Madera	Merced	Tulare	San Joaquin	Stanislaus
Square Miles (a)	5,998	8,170	1,436	2,147	2,008	4,844	1,400	1,500
Population, 2000 (a)	799,407	661,645	129,461	123,109	210,554	368,021	563,598	446,997
Hispanic (a)	44.0%	38.4%	43.6%	44.3%	45.3%	50.8%	30.5%	31.7%
Caucasian (a)	39.7%	49.5%	41.6%	46.6%	40.6%	41.8%	47.4%	57.3%
African American (a)	5.3%	6%	8.3%	4.1%	3.8%	1.6%	6.7%	2.6%
Asian (a)	8.1%	3.4%	3.1%	1.3%	6.8%	3.3%	11.4%	4.2%
American Indian & Alaskan Native (a)	1.6%	1.5%	1.7%	2.6%	1.2%	1.6%	1.1%	1.3%
Pacific Islander & Native Hawaiian (a)	0.1%	0.1%	0.2%	0.2%	0.2%	0.1%	0.3%	0.3%
"Other" (a)	1.2%	1.1%	1.5%	0.9%	2.1%	0.8%	16.3%	16.8%
Two or More Races (a)	4.7%	4.1%	4.8%	5.2%	5.7%	4.6%	6.0%	5.4%
Unemployment Rate, 2001 (b)	13.3%	10.4%	13.4%	11.7%	13.6%	15.2%	8.8%	10.4%
Life expectancy (a)	75.6	74.4	75.2	75.9	75.8	75.1	75.3	75.6

(a) U.S. Census Bureau, Census 2000 Redistricting Data (Public Law 94-171) Summary File, Matrices PL1, PL2, PL3, and PL4. Available: <http://quickfacts.census.gov/qfd/index.html> Accessed June 8, 2002.
 (b) State of California, Employment Development Department, Labor Market Information Division. Available: <http://www.calmis.cahwnet.gov/htmlfile/subject/ltable.htm> Accessed June 8, 2002.

Economy

According to the US Census Bureau (2000), 13 of the nation’s 101 poorest communities are located in California’s San Joaquin Valley. Census data show that the average per capita income for people of Central San Joaquin Valley counties falls well below the state average (Table 2). Similarly, 25-33% of Central San Joaquin Valley children ages 0-17 live in poverty.

County	Income Per Capita 1999	Percent People Below Poverty Level 1999
FRESNO	\$15,495	22.9%
KERN	\$15,760	20.8%
KINGS	\$15,848	19.5%
MADERA	\$14,682	21.4%
MERCED	\$14,257	21.7%
SAN JOAQUIN	\$17,365	17.7%
STANISLAUS	\$16,913	16.0%
TULARE	\$14,006	23.9%
CALIFORNIA	\$22,711	14.2%

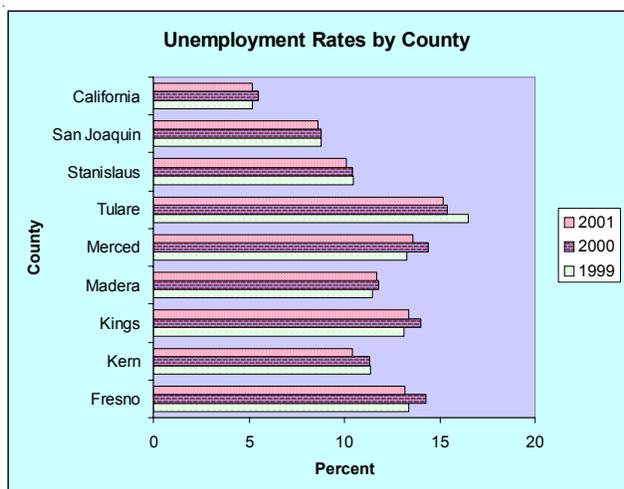
Source: US Census Bureau, 2000

The social and economic conditions in many of the Central San Joaquin Valley's communities prompted the *National Journal* to characterize the region as a "new, Appalachia west." The *National Journal* reported that "changes in public sentiment, in law enforcement, and in the very nature of California agriculture are working together to create what many social welfare experts fear may become a new, Western Appalachia – a large, permanent culture of deep, rural poverty, whose faces may change from one wave of immigrants to the next, but whose conditions never improve" (Kirschten, 1999).

Unemployment

The region's unemployment rate (see Figure 3) is 2 - 3 times higher than it is in the State of California or in the rest of the nation. For instance, while the US reported a 3-4% unemployment rates in 2000 and the State of California reported 5.2% unemployment rate during the same period, the Central San Joaquin Valley's unemployment rate averaged 12.9%.

Figure 3



Source: Umbach, 2002

Education

The educational attainment level of Central San Joaquin Valley residents tends to be lower than the California average (Table 3). Of the eight counties examined in this report, only San Joaquin County comes close (71.2%) to the percentage of individuals at the state level who have a high school education (76.8%) at age 25 and above.

In seven of the eight counties fewer than one in six persons holds a bachelor's degree, compared to one in four in the State of California. Finally, residents in each of the Central San Joaquin Valley counties are more likely to speak a language other than English at home than are residents of the state as a whole.

County	Percentage of individuals age 25 and above with a high school diploma	Percentage of individuals age 25 and above with Bachelor degree	Language, other than English Spoken at Home
Fresno	67.5	17.5	40.8
Kern	68.5	13.5	33.4
Kings	68.8	10.4	36.7
Madera	65.4	12.0	37.0
Merced	63.8	11.0	45.2
San Joaquin	71.2	14.5	33.7
Stanislaus	70.4	14.1	32.4
Tulare	61.7	11.5	43.8
California	76.8	26.6	24.9

Source: US Census Bureau, 2002

Health Issues

The research literature suggests that factors affecting the health status of rural Americans include inadequate access to health care services (House, 2001), fragmented health care services, derisory health insurance coverage (UCLA Center for Health Policy Research, 2000), education, income (Flaskerud, 2002), ethnicity (Karter, Ferrara, Liu, et al., 2002), place of residence (Williams and Collins, 2001), and individual behavioral patterns (USDHHS, 2000a). Each of these factors have been found to influence the health status of residents in the Central San Joaquin Valley.

The Central San Joaquin Valley has among the highest teen pregnancy rates, infant mortality rates, syphilis cases, homicides and motor vehicle fatalities in the country. The region also has the third highest asthma mortality rate in the nation (American Lung Association of Central California, 2001). Additional health issues affecting Central San Joaquin Valley include diabetes, heart disease, stroke, and sickle cell anemia (California Department of Health and Human Services, 2001).

Measuring Health

Health indicators are measured and reported either by how frequently they occur in a given population (incidence) or by how common a particular indicator is at a given period of time (prevalence). These indicators provide morbidity (incidence of a given health condition) and mortality (number of deaths) data affecting a given population at any given period of time. Table 4 shows the leading causes of death in the US during 2000.

Health Condition	Number
Heart Disease	709,894
Cancer	551,833
Chronic Lower Respiratory Disease	123,550
Accidents	93,592
Diabetes	68,662
Pneumonia/Influenza	67,024
Alzheimer's Disease	49,044
Nephritis, nephrotic syndrome, and nephrosis	37,672
Septicemia	31,613

Healthy People 2010

For over 20 years, a series of Healthy People initiatives have established national goals and objectives designed to improve the health status of the US population. The current initiative, [Healthy People 2010](#) outlines the nation's prevention agenda that will result in health improvements and outcomes. [Healthy People 2010](#) seeks to achieve its goals and objectives through an emphasis on primary prevention and interdisciplinary collaboration.

[Healthy People 2010](#) has two primary goals (Table 5), which are spelled out in the 28 focus areas (see Table 6) and delineated in 467 objectives. In order to facilitate, implement, track, and evaluate them, they are organized into 10 Leading Health Indicators (Table 7).

Goal 1	To increase life expectancy and quality of life	Healthy People 2010 seeks to achieve this goal by helping individuals gain the knowledge, motivation, and opportunities they need to make informed decisions about their health. Given the fact that individual and community health are often inseparable, it is critical that both the individual and the community do their parts to increase life expectancy and improve quality of life.
Goal 2	To eliminate health disparities among segments of the population, including differences that occur by gender, race or ethnicity, education or income, disability, geographic location, or sexual orientation.	The greatest opportunities for reducing health disparities are in promoting communitywide safety, education, and access to health care, and in empowering individuals to make informed health care decisions.

Source: USDHHS, 2000a

1	Access to Quality Health Services
2	Arthritis, Osteoporosis, and Chronic Back Conditions
3	Cancer
4	Chronic Kidney Disease
5	Diabetes
6	Disability and Secondary Conditions
7	Educational and Community-Based Programs
8	Environmental Health
9	Family Planning
10	Food Safety
11	Health Communication
12	Heart Disease and Stroke
13	HIV
14	Immunization and Infectious Diseases
15	Injury and Violence Prevention
16	Maternal, Infant, and Child Health
17	Medical Product Safety
18	Mental Health and Mental Disorders
19	Nutrition and Overweight
20	Occupational Safety and Health
21	Oral Health
22	Physical Activity and Fitness
23	Public Health Infrastructure
24	Respiratory Diseases
25	Sexually Transmitted Diseases
26	Substance Abuse
27	Tobacco Use
28	Vision and Hearing

Source: USDHHS, 2000a

Indicator	Selected Objectives to Measure Progress
1. Physical Activity	22.7 Increase the proportion of adolescents who engage in vigorous physical activity that promotes cardiovascular fitness 3 or more days per week for 20 or more minutes per occasion. 22.2 Increase the proportion of adults who engage regularly, preferably daily, in moderate physical activity for at least 30 minutes per day.
2. Overweight and Obesity	19-3c Reduce the proportion of children and adolescents who are overweight or obese. 19-2 Reduce the proportion of adults who are obese.
3. Tobacco Use	27-2 c Reduce cigarette smoking by adolescents. 27-3 Reduce cigarette smoking by adults
4. Substance Abuse	26-10a Increase the proportion of adolescents not using alcohol or any illicit drugs during the past 30 days. 26-10c Reduce the proportion of adults using any illicit drug during the past 30 days. 26-11c Reduce the proportion of adults engaging in binge drinking or alcoholic beverages during the past month.
5. Responsible Sexual Behavior	25-11 Increase the proportion of adolescents who abstain from sexual intercourse or use condoms if currently sexually active. 113-6a. Increase the proportion of sexually active persons who use condoms.
6. Mental Health	19-9b. Increase the proportion of adults with recognized depression who receive treatment.
7. Injury and Violence	15-15a. Reduce deaths caused by motor vehicle crashes. 15-32. Reduce homicides.
8. Environmental Quality	8-1a Reduce the proportion of persons exposed to air that does not meet the US Environmental Protection Agency's health-based standards for ozone. 27-10 Reduce the proportion of non-smokers exposed to environmental tobacco smoke.
9. Immunization	14-24a Increase the proportion of young children who receive all vaccines that have been recommended for universal administration for at least 5 years. 14-29a,b Increase the proportion of non-institutionalized adults who are vaccinated annually against influenza and ever vaccinated against pneumococcal disease.
10. Access to Health Services	1-1 Increase the proportion of persons with health insurance. 1-4a Increase the proportion of persons who have a specific source of ongoing care. 16-6a Increase the proportion of pregnant women who begin prenatal care in the first trimester of pregnancy.

Source: USDHHS, 2000a (Healthy People 2010)

TEN LEADING HEALTH INDICATORS IN THE CENTRAL SAN JOAQUIN VALLEY

1. Physical Activity

Research shows that physical inactivity contributes to a number of detrimental health conditions including increased risk for premature death, increased rates of cardiovascular disease, developing diabetes, high blood pressure and colon cancer (Caspersen, Powell, and Christianson, 1985; Primos, 1996; USDHHS, 1996). The data suggests that lack of regular physical activity combined with poor dietary patterns (e.g., diets high in fats) have an adverse impact on the health status of Americans, accounting for an estimated 300,000 deaths every year. In the US only tobacco use contributes to more deaths than a sedentary life style (CDC, 2002a).

Given the large number of preventable deaths due to physical inactivity, it is not surprising that the American College of Sports Medicine (ACSM) recommends that healthy Americans should exercise at least three times per week at 60-80% of their maximum heart rate (ACSM, n.d.). Data from the 1996 California Behavioral Risk Factor Surveillance System (CBRFSS) shows the physical inactivity level among Central San Joaquin Valley residents (48.8%) to be similar to the rest of the state at 49.1%. It is estimated that only 15% of the US population engages in the recommended leisure time physical activity. Healthy People 2010 goals are that 30% of adults and 85% of adolescents will engage in regular leisure time physical activity.

Physical inactivity patterns appear to be influenced by race, gender, and ethnicity. Data from the CORE Cardiovascular Disease Outreach, Resources and Epidemiology Program show that 74% of Hispanic adult males do not engage in regular physical activity compared to 64% of Caucasian adult males. Differences were also observed by gender; 49% of White adult females reported lack of regular physical activity compared to 64% of Hispanic females.

Lack of physical activity is reflected by current morbidity and mortality data for Central San Joaquin Valley residents. The data show that Central San Joaquin Valley residents experience higher death rates from ischemic heart disease, 174.2 per 100,000 compared to 169.9 per 100,000 population in California and 194.2 per 100,000 US residents in the year 2000 (Rand, 2000). Similarly, Central San Joaquin Valley residents have the highest prevalence of diabetes. According to CORE data (1998) Hispanic women in the Central San Joaquin Valley have a rate that is three times greater (17.9%) than that of Caucasian women (4.9%). These rates are higher than the rate for all California women (Rand, 2000).

2. Overweight and Obesity

Body mass index (BMI) is an estimate of body fat based on height and weight that applies to both adult men and

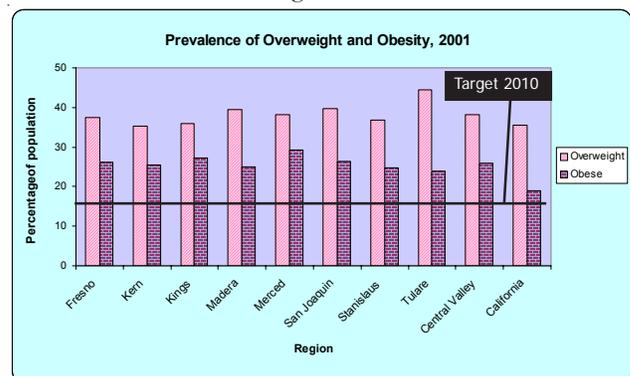
women. It is calculated by dividing a person's weight in kilograms by their height in squared meters. An overweight individual is defined as a person with a body mass index between 25 and 29.9. An obese person is defined as an individual with a BMI greater than 30. Overweight and obesity have been linked to severe health problems including cardiovascular diseases, arthritis, diabetes, hypertension and cancer (USDHHS, 1996).

Data from the 2001 California Health Interview survey (CHIS) suggests the prevalence of obesity in the Central San Joaquin Valley is similar to that of the nation at 26%. These rates are higher than the statewide prevalence rate of 19% and are well above the Healthy People 2010 goal of 15%.

The percentage of overweight individuals in the Central San Joaquin Valley (38%) is higher than the state (36%) and national average (35%). Race and ethnicity seem to play a role in overweight and obesity rates in the Central San Joaquin Valley. CHIS data (2001) show that Hispanic men and women are more likely to be overweight (45% and 42% respectively) than are Caucasian men and women (28% and 32% respectively).

Figure 4 shows the rates of overweight and obesity for adults in the Central San Joaquin Valley and their comparisons to the Healthy People 2010 target.

Figure 4



Source: CHIS, 2001

3. Tobacco Use

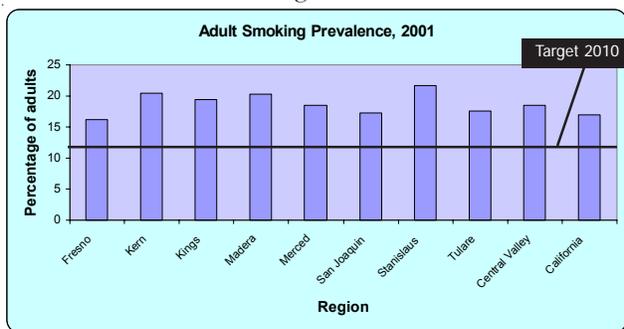
Tobacco use, including cigarettes and smokeless tobacco products, have been linked to a number of chronic health conditions including coronary heart disease, stroke, cancer, arteriosclerosis, chronic obstructive pulmonary disease, gastritis and osteoporosis. The Environmental Protection Agency has classified second-hand smoke¹ as a Group A carcinogen, a classification reserved only for the most

¹ Second hand smoke is a type of exposure to tobacco products and comes from the burning end of a cigarette.

dangerous substances including asbestos and radon (California Department of Health and Human Services, 2002).

Data from the CHIS (2001) indicate that 19% of adults in the Central San Joaquin Valley had used tobacco products at least once in the 30 days preceding the study. This percentage is lower than the national average of 20% (27% for rural areas), but higher than the state average of 17%. Furthermore, that figure is seven percent higher than the Healthy People 2010 goal of 12% (Figure 5).

Figure 5

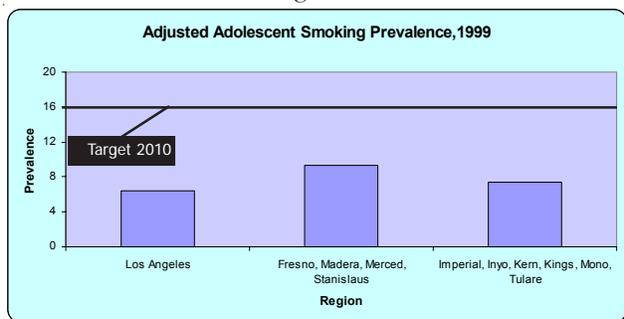


Source: CHIS 2001

The death rate from lung cancer in the Central San Joaquin Valley region has been estimated at 45.21 per 100,000 as compared to 41.5 for the State of California and 55.8 per 100,000 inhabitants for the US¹. Similarly, mortality from chronic obstructive pulmonary disease (COPD) is higher in the Central San Joaquin Valley region (34.4 per 100,000) than the State rate of 29.7 per 100,000 but slightly lower than the national rate of 34.8 per 100,000.

Figure 6 shows the rates of tobacco use among adolescents in the Central San Joaquin Valley. Adolescent smoking prevalence in the counties of Fresno, Madera, Merced and Stanislaus (9%) is lower than the Healthy People 2010 goal of 16%.

Figure 6



Source: California Tobacco Survey, 2001.

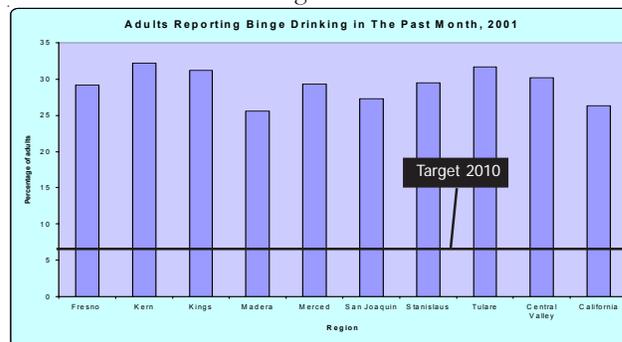
¹ The Healthy People 2010 goal is to reduce lung cancer deaths to 44.8 per 100,000 inhabitants.

4. Substance Abuse

Recent data (CHIS, 2001) shows that the incidence of binge drinking in the Central San Joaquin Valley (30.2 per 100,000 population) is almost double the US incidence (16 per 100,000 population).

Figure 7 shows the percentage of individuals in each county who reported binge drinking in the past 30 days. None of the eight counties come close to the Healthy People 2010 goal in this area.

Figure 7

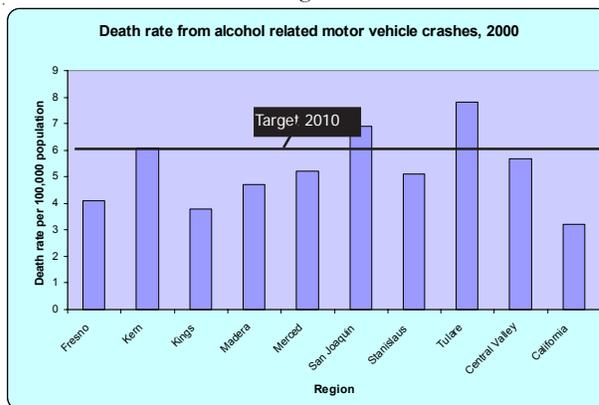


Source: CHIS 2001

The death rate from alcohol related motor vehicle crashes is higher in seven of the eight Central San Joaquin Valley counties than the death rate in State of California (Figure 8). The death rate exceeds the goal delineated in Healthy People 2010 of 6.1%.

High levels of alcohol use have been related to a number of health conditions including liver disease. RAND data show that the mortality rate from alcoholic liver diseases in the Central San Joaquin Valley is 8.0 per 100,000 compared to 7.1 per 100,000 in the state and 4.4 per 100,000 in the nation.

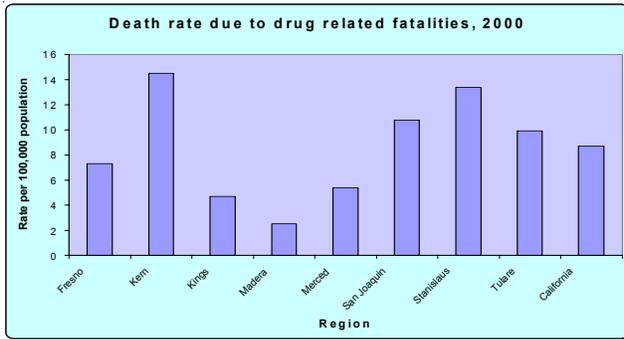
Figure 8



Source: RAND, 2001

The National Drug Control Policy has designated the Central San Joaquin Valley as a High Intensity Drug Trafficking Area (HIDTA). The HIDTA area consists of Fresno, Kern, Kings, Madera, Merced, Sacramento, San Joaquin, Stanislaus, and Tulare Counties. In 2000, of the eight Central San Joaquin Valley counties, only Madera and Kings counties reported a drug related death rate of less than five per 100,000 inhabitants (Figure 9).

Figure 9



Source: Rand, 2002

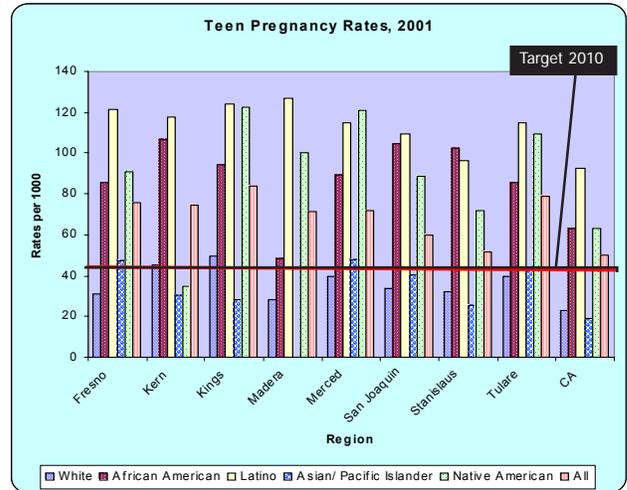
5. Responsible Sexual Behavior

Responsible sexual behavior is measured by indicators such as the percentage of sexually active populations who consistently engage in safer sex activities (e.g., condom use), the rates of sexually transmitted diseases (STDs), infection with the Human Immunodeficiency Virus, and the rate of unintended pregnancies among teenagers. Healthy People 2010 indicates that the only effective way to prevent some of these adverse consequences is to practice abstinence.

There is little data documenting the number of sexually active teens in the Central San Joaquin Valley. Healthy People 2010 objectives call for teen pregnancies not to exceed 43 pregnancies per 1,000 young women.

The California Report Card shows that the Central San Joaquin Valley counties of Kings, Tulare, Madera, Fresno and Kern have among the highest teen pregnancy rates in the state with marked differences found among ethnic and racial groups. Teen pregnancy rates in 1999 were 3-4 times higher among African-American and Latino(a) adolescents compared to Caucasian teens (Figure 10). The prevention of unintended teen pregnancies is important because adolescent mothers are less likely to avail themselves of prenatal health care services, are more likely to give birth to low-birth weight babies, and to experience higher rates of infant mortality.

Figure 10



Note: Healthy People 2010 Target is 43 pregnancies among women aged 15 to 17 years. California County Data Book provides data on pregnancies among women aged 15 to 19 years. Source: California County Data Book (2001)

The rates of reported STDs among Central San Joaquin Valley residents are higher than for the State of California. Out of 327 primary and secondary syphilis cases reported in California in 2000 only 24 were from the Central San Joaquin Valley. Interestingly, Kings County has not had a single case of syphilis since 1998 when it reported just one case.

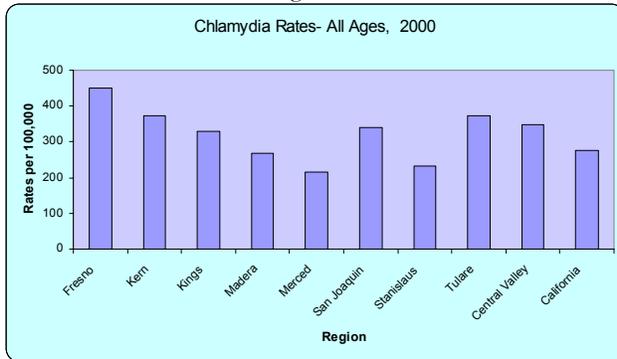
Region	Gonorrhea	Chlamydia	Primary and Secondary Syphilis
Fresno	87.2	451	0.5
Kern	83.9	372.7	1
Kings	43.1	329.4	*
Madera	21.9	268.6	*
Merced	25.7	214.1	4.7
San Joaquin	81.6	338.4	0.2
Stanislaus	51.5	231.6	0.2
Tulare	22.7	371.9	0.3
Central Valley	64.7	346.8	0.7
California	62.7	276.8	0.9

* = Less than 0.05 per 100,000 population
Source: California Department of Health Services, (2002)

Chlamydia is the most common STD in the United States with more than 1.5 million cases occurring annually among males and some 2.5 million cases among females. The rate of Chlamydia cases in the Central San Joaquin Valley is three times that of the state. Figure 11 shows that five of the eight Central San Joaquin Valley counties reported among the highest Chlamydia rates in the state with over 300 cases per 100,000 inhabitants. These rates placed these small rural counties parallel with larger urban areas such as

Los Angeles, San Francisco, and San Diego. The rates of Chlamydia in the Central San Joaquin Valley exceed the Healthy People 2010 goal of reducing the proportion of adolescents and young adults with Chlamydia trachomatis infections.

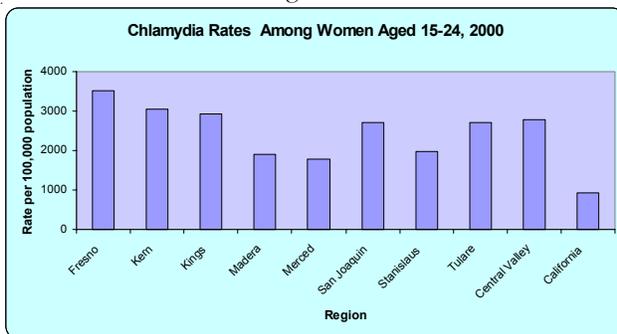
Figure 11



Source: California Department of Health Services, 2002

This situation becomes even more alarming among young women as the incidence of Chlamydia in females age 15-24 is 9-10 times the general population rate. Figure 12 shows the Chlamydia rate among women aged 15-24 in the Central San Joaquin Valley. Once again, these rates place the Central San Joaquin Valley counties in parallel, and in some cases exceeding, those in larger urban areas.

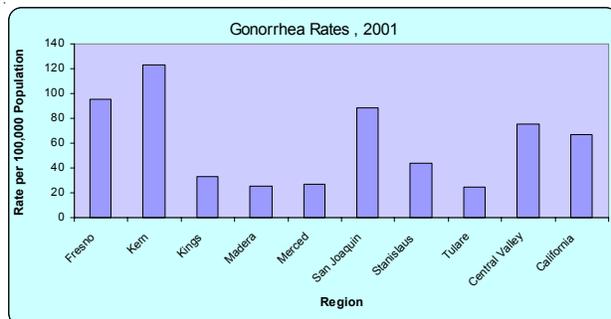
Figure 12



Source: California Department of Health Services (n.d.).

Figure 13 shows that the rate of new gonorrhea cases in all eight counties in the Central San Joaquin Valley exceeds the Healthy People 2010 goal of no more than 19 new cases per 100,000 population.

Figure 13



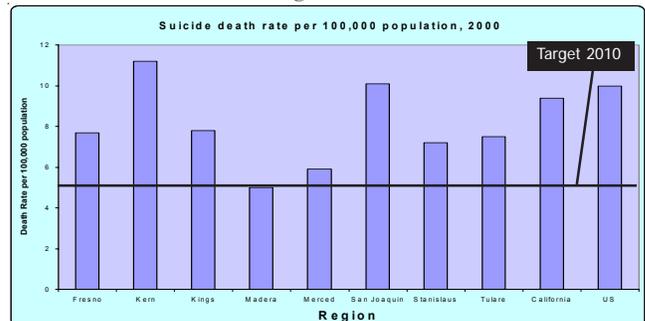
Source: California Department of Health and Human Services (n.d.).

6. Mental Health

Data from the National Center for Health Statistics (2000) show that suicide is the eleventh leading cause of death in the United States. Furthermore, suicide is the third leading cause of death in the United States for people in the 15 to 24 year old age group. The suicide rate in the Central San Joaquin Valley region is reported at 8.28 per 100,000 inhabitants, over 60% higher than the Healthy People 2010 goal of 5 deaths per 100,000 population.

In 2000, Kern County experienced the highest suicide rate in the US at 11 individuals per 100,000 inhabitants (Figure 14).

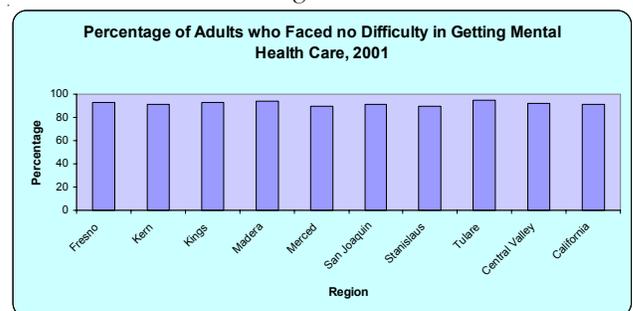
Figure 14



Source: RAND, 2000

Data are not available to indicate the percentage of adults with recognized depression who do not receive treatment in the Central San Joaquin Valley. Data from the CHIS (2001) shows that 92% of those seeking mental health care in the past 12 months did not report any difficulty in getting mental health services (Figure 15).

Figure 15



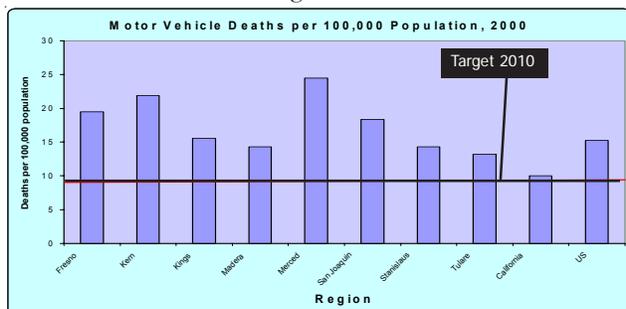
Source: California Health Interview Survey, 2001.

7. Injury and Violence

Data from the National Centers for Health Statistics (2001) show that unintentional injury is the leading cause of death in the 1 - 44 year old age group. Unintentional injuries includes those from falls, fires, and motor vehicle accidents.

The 2000 mortality rate from motor vehicle accidents in the Central San Joaquin Valley (17.9 per 100,000) is almost 80% higher than the statewide rate (10 per 100,000) and 50% higher than the national rate of 15.2 per 100,000 (Figure 16). The rates in each of the eight Central San Joaquin Valley counties exceeds those established in Healthy People 2010 of 9.2 deaths per 100,000 population.

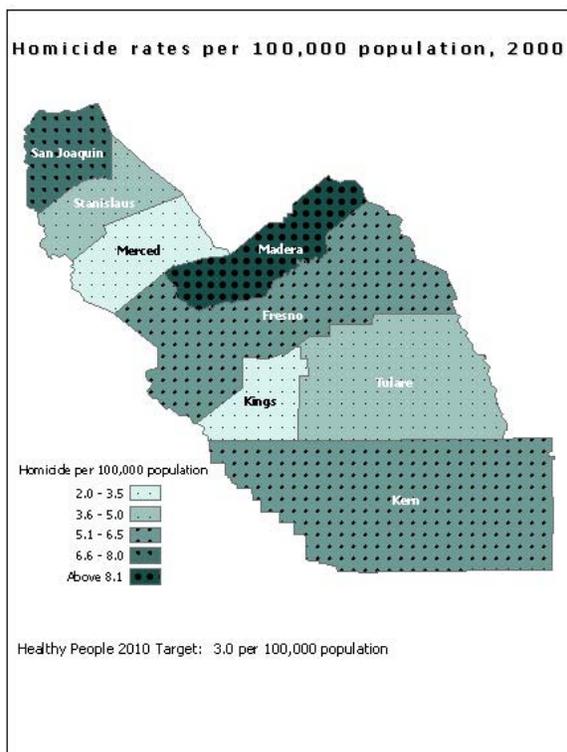
Figure 16



Source: RAND, 2000

The 2000 homicide rate in the Central San Joaquin Valley is substantially higher (11.5 per 100,000 population), than both the state rate (6.2 per 100,000) and the national rate (5.9 per 100,000). The Central San Joaquin Valley rate is almost 4 times higher than the Healthy People 2010 goal of 3 deaths per 100,000 population (Figure 17).

Figure 17



8. Environmental Quality

The World Health Organization (1997) has defined Environmental Health as comprising all those aspects influencing a person's well being that are determined or influenced by the environment. Those factors include chemical, physical, and biological agents in addition to factors such as housing, urban development, land-use and transportation, industry, and agriculture (WHO, 1997).

According to the US Environmental Protection Agency (EPA) poor environmental quality is estimated to be directly responsible for approximately one quarter of all preventable health conditions in the world (EPA, 1997). Poor environmental quality is perceived to be a serious problem by the majority of Central San Joaquin Valley residents (Baldassare, 2001). Exposure to ozone, even at relatively low levels, can reduce lung function. Repeated exposure can make people, especially children, the elderly and those with respiratory diseases such as asthma, more susceptible to respiratory diseases. To make the Air Quality Index(AQI) as easy to understand as possible, the EPA has divided the AQI scale into six categories (Table 9).

Table 9
Air Quality Index Scale

Air Quality Index (AQI) Values	Levels of Health Concern	Colors
When the AQI is in this range:	...air quality conditions are:	...as symbolized by this color:
0 to 50	Good	Green
51 to 100	Moderate	Yellow
101 to 150	Unhealthy for Sensitive Groups	Orange
151 to 200	Unhealthy	Red
201 to 300	Very Unhealthy	Purple
301 to 500	Hazardous	Maroon

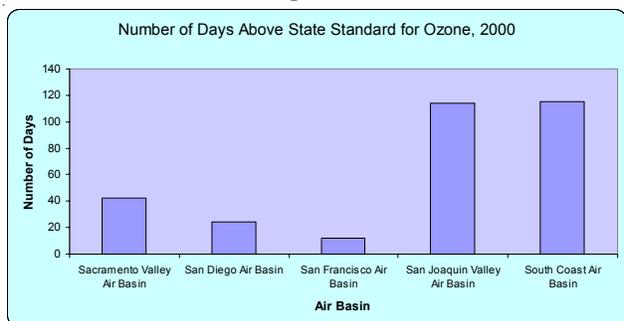
Source: Environmental Protection Agency, 2000

Though only about nine percent of California's population lives in the San Joaquin Valley, pollution sources in the region account for about 15% of the total statewide criteria pollutant emissions (Figure 18). The San Joaquin Valley is the largest non-attainment area in California (Environmental Protection Agency, 2002).

The entire San Joaquin Valley has been classified as a non-attainment area for both particulate matter and ozone¹ (Figure 19). The Central San Joaquin Valley counties are generally in compliance with regard to carbon monoxide, with the exception of urbanized areas in Fresno and Modesto.

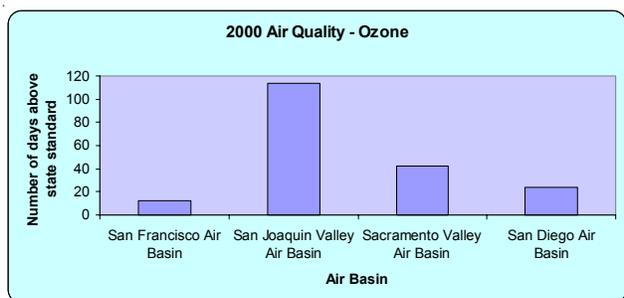
¹Particulate matter, carbon monoxide, nitrogen dioxide, sulfur dioxide and lead.

Figure 18



Source: ARB Almanac 2002.

Figure 19

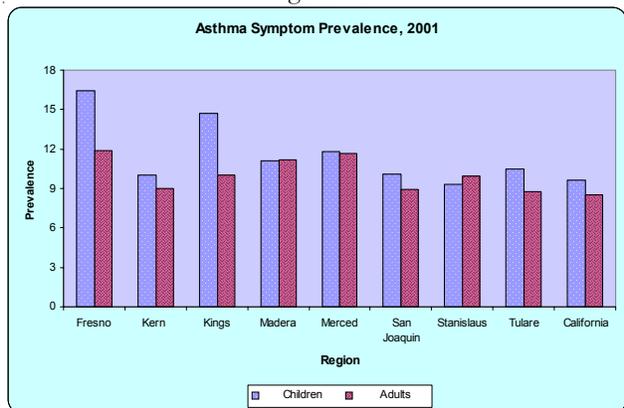


Source: ARB Almanac 2002.

The poor air quality in the Central San Joaquin Valley is reflected in high death rates due to COPD (34.4 per 100,000) compared to state rates (29.7 per 100,000) and national rates (34.8 per 100,000).

Poor air quality contributes to one of the highest asthma rates in the nation for both adults and children (Figure 20). Symptoms associated with asthma have been shown to affect quality of life specifically in children where it may limit their ability to enjoy outdoor activities based on air quality and to participate in leisure time physical activity. Asthma prevalence among children is highest in Fresno County (16.4%) whereas the statewide prevalence is 9.6% and 10% nationwide (CHIS, 2001).

Figure 20



Source: CHIS, 2001

9. Immunizations

Regular immunizations can prevent the debilitating and, in some cases, fatal effects of infectious diseases. Regular childhood immunizations have greatly contributed to a decrease in childhood preventable diseases including polio, rubella, measles, diphtheria, and pertussis (whooping cough) among American children (Children's Hospital of Philadelphia, n.d.). In fact, vaccinations have been so effective that it is estimated that for every \$1 cut in polio immunization costs \$10 in later medical costs. Every \$1 cut in measles, mumps, rubella immunization programs costs \$14 in later medical costs (House Select Committee, 1995).

The Centers for Disease Control and Prevention recommend that American children should receive a 4:3:1¹ series of immunizations before age two. Immunization rates for residents of the Central San Joaquin Valley are comparable and in some cases higher than rates for all California residents (Figure 21). Table 10 provides a summary of Healthy People 2010's objectives in regard to efforts to control diseases preventable through universal vaccinations.

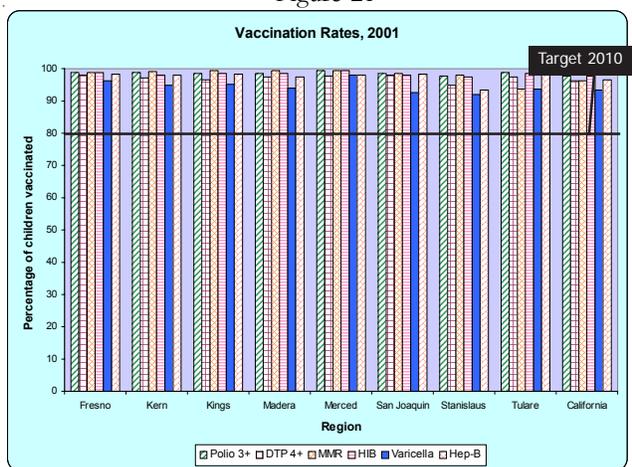
Table 10
Healthy People 2010 Objective 14-1

Objective	Reduction in Vaccine-Preventable Diseases	1998	2010
		Baseline	Target
<i>Number of Cases</i>			
14-1a.	Congenital rubella syndrome (children under age 1 year)	7	0
14-1b.	Diphtheria (persons under age 35 years)	1	0
14-1c.	Haemophilus influenzae type b* (children under age 5 years)	163	0
14-1d.	Hepatitis B (persons aged 2 to 18 years)	945†	9
14-1e.	Measles (persons of all ages)	74	0
14-1f.	Mumps (persons of all ages)	666	0
14-1g.	Pertussis (children under age 7 years)	3,417	2,000
14-1h.	Polio (wild-type virus) (persons of all ages)	0	0
14-1i.	Rubella (persons of all ages)	364	0
14-1j.	Tetanus (persons under age 35 years)	14	0
14-1k.	Varicella (chicken pox) (persons under age 18 years)	4 million†	400,000

Source: USDHHS, 2000 (Healthy People 2010)

¹ Visit <http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5102a4.htm> for additional information.

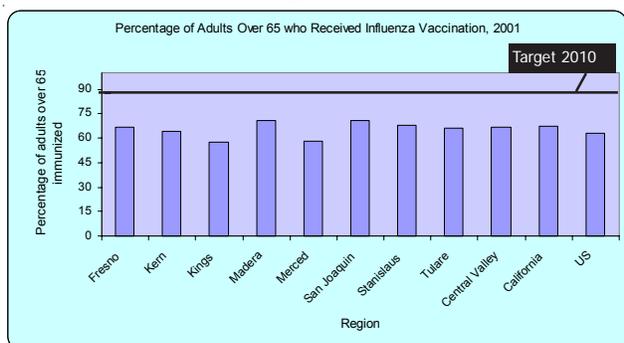
Figure 21



Source: Kindergarten Retrospective Survey, 2001

Influenza vaccination coverage for adults over the age of 65 lags behind the Healthy People 2010 target of 90% coverage. National data for older adults¹, shows that among Medicare beneficiaries, only 26% have been vaccinated against pneumococcus. Immunization rates for older adults appear to be influenced by factors including age, income, and insurance coverage. In the Central San Joaquin Valley older residents fall well below the Healthy People 2010 recommendations (Figure 22).

Figure 22



Source: California Department of Health and Human Services, 2001.

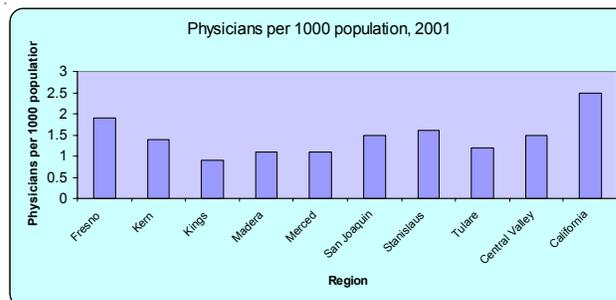
10. Access to Health Services

The US has one of the best medical care systems in the industrialized world; however, disparities exist in residents ability to access those services. According to Healthy People 2010, "Access to quality care is important to eliminate health disparities and increase the quality and years of healthy life for all persons in the United States." Education, income, and place of residence (rural or urban) all influence a person's ability to access quality health services.

¹ Individuals age 65 and above.

The Central San Joaquin Valley has a deficit of health care providers for its growing population. Figure 23 shows the ratio of persons per physician in each of the Central San Joaquin Valley counties. The data shows that each of the Central San Joaquin Valley counties has a higher number of individuals per physician than the state average. Furthermore, four counties have less than one half the number of physicians than the state average.

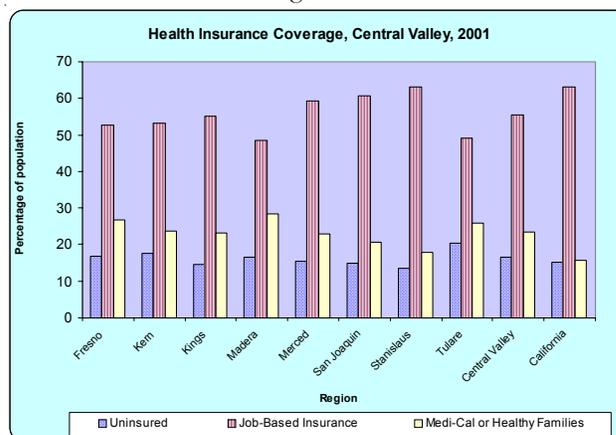
Figure 23



Source: RAND 2001

CHIS (2001) data show that Central San Joaquin Valley residents report higher rates of uninsured (20%) compared to the state (18%) or national rates (19%). Central San Joaquin Valley residents also report higher rates of coverage by Medi-Cal or Healthy Families than do the residents of the State of California as a whole (Figure 24). Similarly, Central San Joaquin Valley residents in seven of the eight counties, report lower levels of employer-provided health insurance coverage.

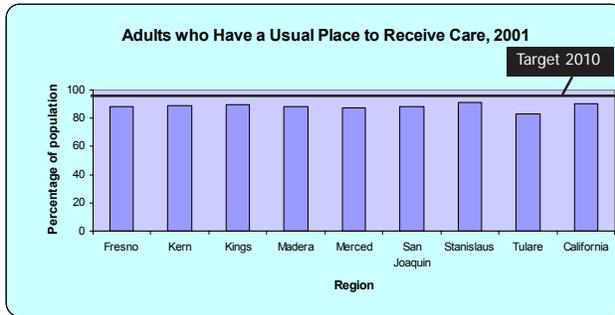
Figure 24



Source: CHIS, 2001

Healthy People 2010 specifies that 96% of the population should have a specific source to receive ongoing care. Data from the CHIS (2001) show that 86% of the population in the Central San Joaquin Valley has a usual place to obtain health care services. This is similar to the state percentage of 84%. Figure 25 shows the proportion of Central San Joaquin Valley residents who have a usual place to go when sick or needing health care.

Figure 25

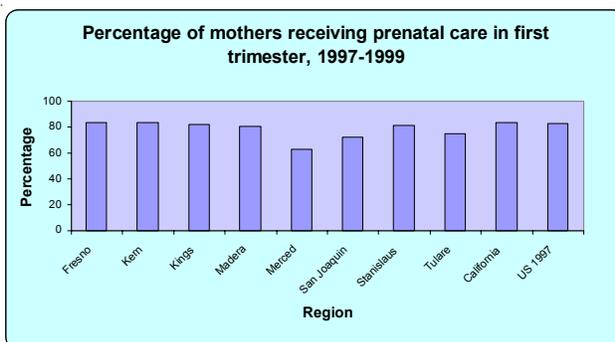


Source: CHIS, 2001

Early prenatal care is essential for insuring a healthy pregnancy and a positive birth outcome. Pre-natal care has been linked to higher birth weights, fewer complications during delivery, and decreased pre-term deliveries. Studies show that for every dollar cut from prenatal care, an increase of \$3.33 was expected in postnatal care and \$4.63 in incremental long-term morbidity costs (Lu, Lin, Priett, and Garite, 2000).

Figure 26 shows the percentage of mothers receiving prenatal care in each of the Central California counties. Data shows that the percentage of females who received prenatal care in the first trimester in the Central San Joaquin Valley (80%) is below that state level of 85% and the 83.5% for all females in the US. On a positive note, the data also shows a gradual decline in the percentage of births with no prenatal care from 30% in 1990 to 20% in 2000.

Figure 26



Source: Medical Care Review, 2001

CONCLUSION

The 10 Leading Health Indicators found in Healthy People 2010 have been developed to reflect the health status of the US population in the current decade. Data presented in this report show that the Central San Joaquin Valley fails, for the most part, to meet Healthy People's 2010 goals and objectives. These findings, summarized on Table 11, provide compelling evidence to support health care providers, administrators, policy makers, and advocates to take action to address the needs of Central San Joaquin Valley residents.

Table 11
Leading Health Indicators Summary

Indicator	Central Valley Compared with California Averages	Central Valley Compared with National Averages	Central Valley Compared with <u>Healthy People 2010</u> Target
Physical Activity	Same	Better	Worse
Overweight and Obesity	Worse	Worse	Worse
Tobacco Use	Worse	Better	Worse
Substance Abuse	Worse	Worse	Worse
Responsible Sexual Behavior	Worse	Worse	Worse
Mental Health	Same	*	Worse
Injury and Violence	Worse	Worse	Worse
Environmental Quality	Worse	Worse	Worse
Immunization	Same	Better for Children Worse for adults	Better for children Worse for Adults
Access to Health Services	Worse	Worse	Worse

* Data inconclusive

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