Assessing the Region Via Indicators

Public Health and Access to Care

(Second Edition)

The State of the Great Central Valley of California

Supporting the economic, social, and environmental well-being of California's Great Central Valley

With a special essay by Dr. Richard Carmona, former Surgeon General of the United States

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ABOUT THE GREAT VALLEY CENTER

Founded in 1997, the Great Valley Center is a nonprofit organization working in partnership with the University of California, Merced to support the economic, social and environmental well-being of California's Great Central Valley.

WE WELCOME YOUR COMMENTS

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Dear Friends,

It is our pleasure to present the new edition of *Assessing the Region Via Indicators — Public Health and Access to Care*. This is an update of an edition first released in 2003.

This report is part of the *State of the Great Central Valley Indicators Series*, our ongoing regional initiative tracking conditions in one of California's fastest growing regions: the 19-county Great Central Valley. In annual installments, the Great Valley Center publishes a cycle of five reports that assess five topic areas: The Economy; The Environment; Community Well-Being; Public Health and Access to Care; and Education and Youth Preparedness.

This edition updates health indicators first introduced in 2003 and adds some new ones. These indicators, which underlie and correlate with many of the other assessments of health, are grouped in sections describing access to care, maternal and child health, senior health, chronic and communicable diseases, and social indicators.

The good news is that progress has been made in a number of critical areas: smoking rates are down, more children are being immunized and in some areas, heart disease is at its lowest in years. However, in other areas — especially those tied to lifestyle choices — various parts of the Valley trail state averages and national goals.

This report was funded by Kaiser Permanente and Bank of the Sierra. We appreciate their support and investment in the region. Special thanks to former Surgeon General Dr. Richard Carmona for his centerpiece essay regarding chronic diseases and the progress that can be made by fostering partnerships to improve the basic understanding of health issues — health literacy — in diverse communities.

Sincerely,

David H. Hosley

David H. Hosley
President

The State of the Great Central Valley
Public Health & Access to Care

Assessing the Region Via Indicators

(Second Edition)

What are Indicators?

Indicators are powerful tools for measuring and tracking overall quality of life and for comparing performance against goals or benchmarks. They help communities monitor conditions by providing a baseline against which future changes can be measured. Indicators help to answer important questions such as how well the economy is functioning, how the schools are doing, or whether air and water quality are improving or worsening.

What are Good Indicators?

A good indicator has several characteristics:

- It addresses a fundamental component of long-term regional or community well-being.
- It is clear and understandable.
- It can be tracked; is statistically measured at regular intervals; and comes from a reliable source.
- It is easy to communicate in concept as well as in terms of its value and importance to the region.
- It measures an outcome rather than an input.

About this Report:

Since 1999, the Great Valley Center has produced an annual report in the five-part *State of the Great Central Valley* series. The themes are updated in five-year increments. This publication is a follow-up to the first health report released in 2003 and authored by Patricia Porter RN, MPH, CHES; Patrick Fox, Ph.D; Ronald Chapman, MD, MPH; and Renee Beard. Other reports in the series cover The Economy; The Environment; Education; and Community Well-Being. The Great Valley Center extends special thanks to Dr. Maria Pallavicini and Alice Moua from the University of California, Merced for their contributions to this edition.

All reports in the series are available at *www.greatvalley.org*

There are a number of references within this report to national goals and or 'Healthy People 2010'. Healthy People 2010 is a set of science-based, 10-year national objectives for promoting health and preventing disease. It should be noted that work is currently underway to develop Healthy People 2020. For more details visit www.healthypeople.gov/hp2020/.

How to Use this Report:

The data presented are a snapshot of information providing tools for measuring the community well-being of the Valley. The report offers data, analysis, and structure which can be used as a benchmark for assessing the progress of the Valley, providing valuable comparative information at the county, subregional, regional, and state levels.

The indicators do not present the entire picture of conditions or issues in the Valley, but they may serve as a guide and model for further research and dialogue. As with any indicators effort, the data should be used with the understanding that there is much more information available to create a more complete, and sometimes more local, assessment. In many cases, additional information is available online through the Great Valley Center website or from the agencies and data sources listed in this report.

Recommendations

Taken together, the indicators in this report suggest five strategies related to public health and access to care that can improve outcomes in the Great Central Valley.

1 **Invest in culturally literate prevention and health education**

As the Valley continues to become more diverse, health literacy will require the efforts of diverse communities, leaders, employers, caregivers, families, and individuals to work together in order to address health problems before they become worse and more expensive to treat.

2 **Continue to stress healthy lifestyles for youth**

The Valley has a younger population than the state — and it is growing rapidly. In an era of scarce resources, a strategic effort to ensure that these future residents and leaders are healthy will keep them well equipped to improve the economic, social and environmental well being of the Valley. Addressing the needs of young people will improve their ability to perform in school and eventually become even more productive members of the community.

3 **Reduce poverty**

While improvement has been made in some portions of the Valley, poverty rates are still too high, especially in rural areas. No matter how much progress or funds are spent on prevention, education and the like, public health is likely to suffer when large segments of the population live in poverty. Regional strategies tied to economic development, diversification, and higher education have the potential to deliver health gains, not just economic ones.

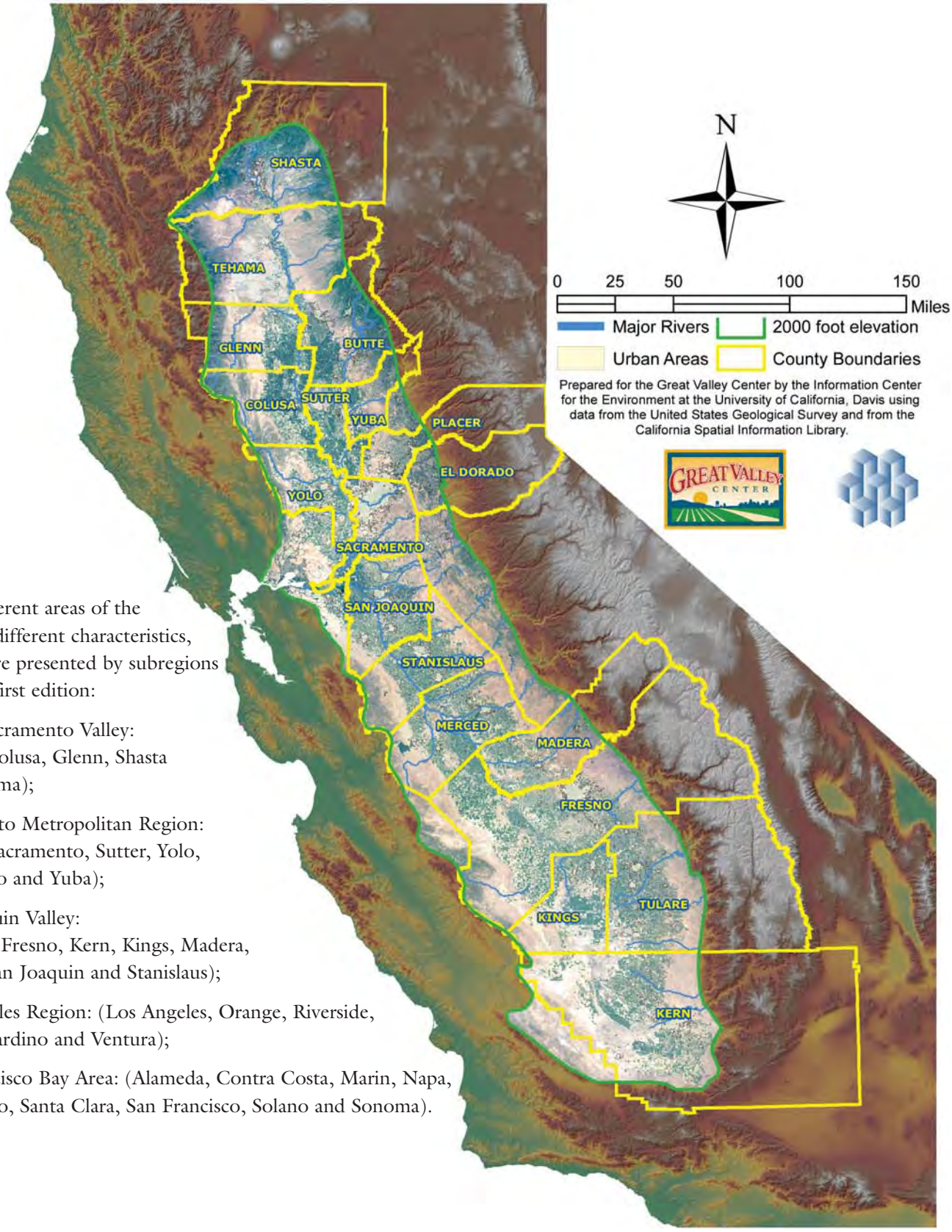
4 **Develop regional coalitions to improve the environment**

It goes without saying that clean air and water are essential to good health. Many of the chronic conditions detailed in this document will only be aggravated by air that is difficult to breathe and water that is unfit to drink. Addressing regional resource issues increasingly requires partnership across jurisdictional, social and economic lines. As communities throughout the Valley work to develop land use and transportation plans and "blueprints", the health impacts of these choices should be considered.

5 **Invest in gathering local data**

In rural counties especially, data is sometimes unavailable due to small population sizes. More resources are needed to develop ways to gather information at a more frequent rate, so that progress can be tracked over time.

The Great Central Valley of California



Because different areas of the Valley have different characteristics, some data are presented by subregions used in the first edition:

- North Sacramento Valley: (Butte, Colusa, Glenn, Shasta and Tehama);
- Sacramento Metropolitan Region: (Placer, Sacramento, Sutter, Yolo, El Dorado and Yuba);
- San Joaquin Valley: (Merced, Fresno, Kern, Kings, Madera, Tulare, San Joaquin and Stanislaus);
- Los Angeles Region: (Los Angeles, Orange, Riverside, San Bernardino and Ventura);
- San Francisco Bay Area: (Alameda, Contra Costa, Marin, Napa, San Mateo, Santa Clara, San Francisco, Solano and Sonoma).

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Access to Care

Access to health care directly affects the well-being of the population.

While many people wait until they are sick to see their doctor, those without insurance are even less likely to see a doctor or receive preventive care than those with health insurance.

• The Valley has a rapidly growing population. It is projected to grow 131% by 2050. This will likely create more demand for health services.

• Poverty is a factor for many without sufficient access to health care, especially children. In the Central Valley, child poverty ranges from just over 8% in the Sacramento foothills to more than 32% in portions of the San Joaquin Valley.

• Misconceptions can lead to people not having adequate health insurance. Many low income families have not enrolled their children in existing low-cost or no-cost programs such as Medi-Cal or Healthy Families, because they are unclear about the differences between the two. In the San Joaquin Valley, 16.5% of the population lack insurance.

• Program enrollment doesn't necessarily mean an individual is obtaining care. There are many who are enrolled in Denti-Cal, yet do not use the service. Only 21.6% of those who had Denti-Cal Fee For Service insurance in the Great Central Valley used it.

POPULATION AND DEMOGRAPHICS

Great Central Valley population projected to increase 131% by 2050.

Definition

Population growth is the number or the percentage of people added to a population over a period of time.

Why is it important?

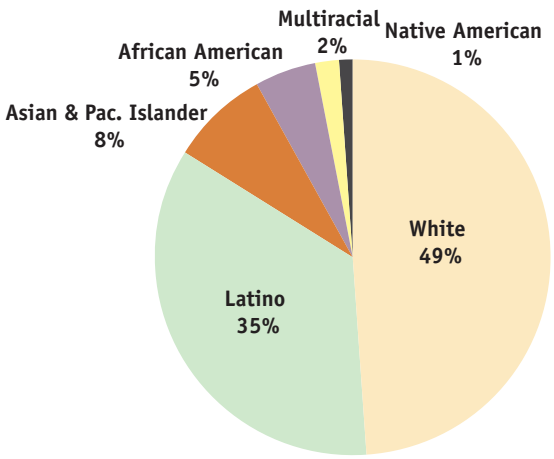
Population growth impacts many aspects of the economy and delivery of public goods and services, including medical care, police, fire and education.

How are we doing?

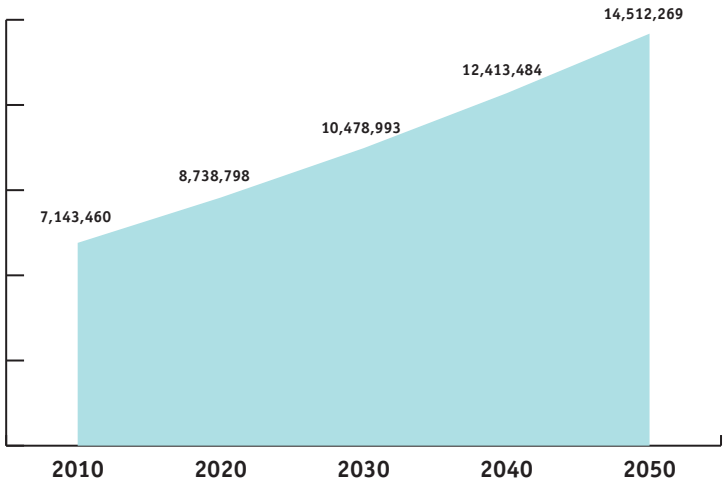
From 2002-2007, the population in the Central Valley increased faster than in any other California region. The population of the 19 county region grew more than 17%. By comparison, the state's population grew 12%. By 2050, the population of the Great Central Valley will have increased 131% from 2000. These projections will create substantial pressure on delivery of health services, education of health professionals, and other public services. More than half (58%) of the Central Valley's population growth is from migration. Sixty percent of the migration is from coastal regions in California.

According to the Public Policy Institute of California, migration is most significant in the North Valley and least significant in the South San Joaquin Valley, where population growth is mostly from births to current residents.

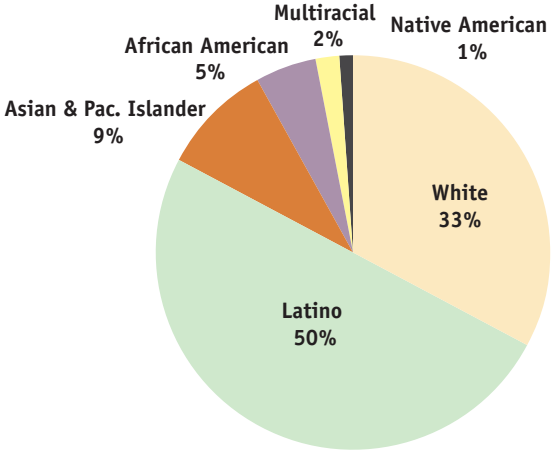
Projected Population by Ethnicity for the Great Central Valley in 2010



Projected Population for the Great Central Valley (2010-2050)



Projected Population by Ethnicity for the Great Central Valley in 2050



Source: California Department of Finance, Demographic Research Unit, 2007
www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/Projections/P3/P3.php

UNINSURED PEOPLE

More people in the San Joaquin Valley report being insured; Sacramento Metropolitan is highest insured region.

Definition:

This indicator shows the percentage of people ages 0-64 who had no insurance for the entire 12 months of 2005, the most recent year available from the California Health Interview Survey.

Why is it important?

Health insurance provides access to health care. Persons with health insurance are more likely to have a primary care provider and to have received appropriate preventive care when compared to those without health insurance. Adults with health insurance are more likely to receive a routine checkup, compared to adults without health insurance.

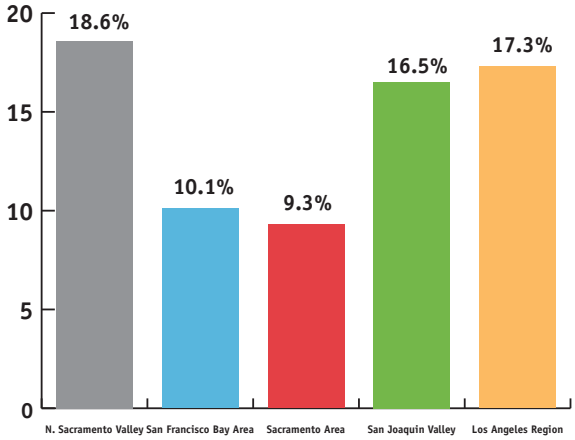
Lack of insurance is not solely an issue for the poor. The majority of California's non-poor uninsured are employed, but are not offered health insurance at work.

According to a study by the California Health Care Foundation, in 2007, California had the eighth largest proportion of uninsured in the nation and the largest number of uninsured residents Uninsured Californians are not all the same; they differ widely according to age group, ethnicity, and income, as well as in attitudes towards health insurance and reasons for not having coverage.

How are we doing?

In 2005, 15% of Californians reported not being currently insured. This compares to 16.5% in the San Joaquin Valley (down from 17.2% in 2001), 9.3% in the Sacramento Metropolitan Area (down from 10.2% in 2001) and 18.6% in the North Sacramento Valley (up from 17% in 2001) .

Percentage of Uninsured People Age 0-64 during the past 12 months, 2005



Source: California Health Interview Survey, 2005, www.chis.ucla.edu

UNINSURED CHILDREN

North Sacramento Valley and San Joaquin Valley exceed state average for uninsured children.

Definition:

This indicator shows the percentage of children 18 and under reported to have no insurance all 12 months of 2005 as reported to UCLA's California Health Interview Survey (CHIS).

Why is it important?

The level of coverage for a child can play a determining role in health quality throughout his or her life. But if low-cost or free health care is available, its use is not guaranteed, as other factors may prevent access to care.

Many low-income California parents are unaware of the existence of the Healthy Families program, fail to understand how it differs from Medi-Cal, or are not sure in which program their children should enroll.

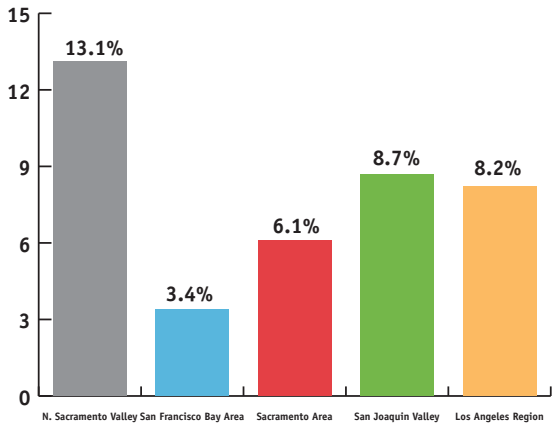
How are we doing?

As reported to the California Health Interview Survey, 7.1% of California children were reported as uninsured. The Los Angeles Region rate is 8.2%, and the San Francisco Bay Area is 3.4%.

Within the Central Valley, the North Sacramento Valley has the highest rate of uninsured children (13.1%). At 8.7%, the San Joaquin Valley is higher than the state rate and up slightly from 2001. The Sacramento Metropolitan Area rate (6.1%) is lower than the state's average rate of 7.1%, but up two percentage points from 2001.

Note: Figures for all regions would be higher if they included children who had no insurance for *part* of the year.

Percentage of Uninsured Children Age 0-18 during the past 12 months, 2005



Source: California Health Interview Survey, 2005, www.chis.ucla.edu

PHYSICIANS

Fewer physicians than state average in most Valley counties.

Definition:

This indicator shows the ratio of physicians to the population by county in 2006.

Health Professional Shortage Areas (HPSAs) are census tracts that have shortages of primary medical care, dental or mental health providers and may be geographic (a county or service area), demographic (low income population) or institutional (comprehensive health center, federally qualified health center or other public facility) as determined by the Federal Government's Health Resources and Services Administration.

Why is it important?

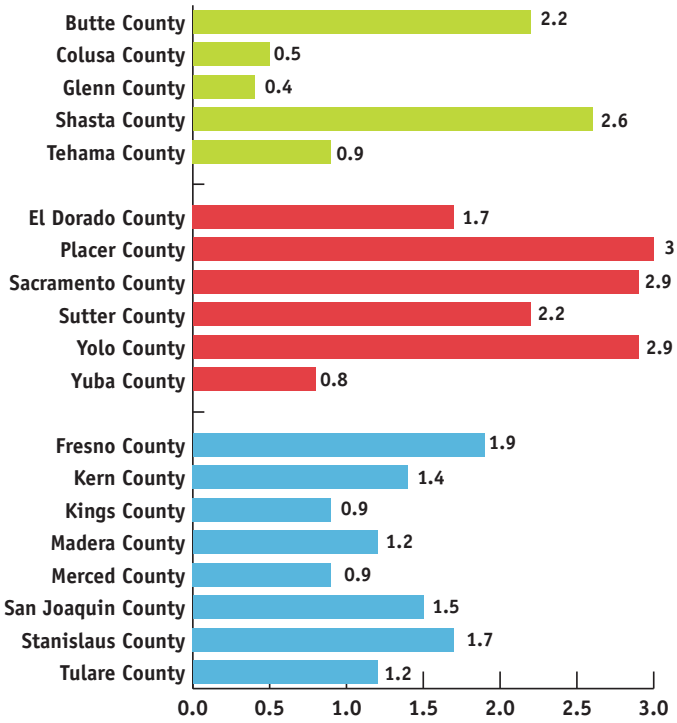
Physicians, especially primary care physicians, are responsible for the prevention, detection, and treatment of health conditions. These efforts are critical to reducing mortality and morbidity. When there is a limited availability of physicians in a community, people are less likely to seek preventive care and more likely to go to a local emergency room or urgent care center for acute symptoms and/or health conditions.

If they are feeling well, many people do not perceive the need to see their physician. However, many common health conditions do not cause people to have noticeable symptoms until they have had the condition for a number of years. In many cases, if a condition is diagnosed early (e.g. breast cancer and diabetes), treatments can be given that can significantly reduce mortality and morbidity that is otherwise associated with the condition if it is diagnosed after a prolonged period following its onset.

How are we doing?

According to RAND California, within the Great Central Valley, Yolo, Placer, Sacramento and Shasta counties have the highest rate of physicians per 1,000 people. All counties within the San Joaquin Valley rate lower than the state average. According to data compiled by the California Office of Statewide Health Planning Healthcare Workforce Development Division, the Health Resources and Services Administration has designated shortage areas of primary care physicians in portions of all Valley counties except Yolo and Yuba.

Licensed Physicians and Surgeons in all specialities per 1,000 by county, 2006



Source: RAND California Database, citing data from HCFA and Medicaid Statistics Branch, 2006
www.ca.rand.org.

DENTI-CAL SERVICES

Yolo, Fresno and Shasta lead subregions in Denti-Cal use.

Definition:

This indicator shows the percentage of Medi-Cal beneficiaries who used Denti-Cal services.

Why is it important?

Regular (at least annual) dental visits provide an opportunity for the early diagnosis, prevention, and treatment of oral and craniofacial diseases and conditions for persons of all ages. It is also an opportunity for the assessment of self-care practices.

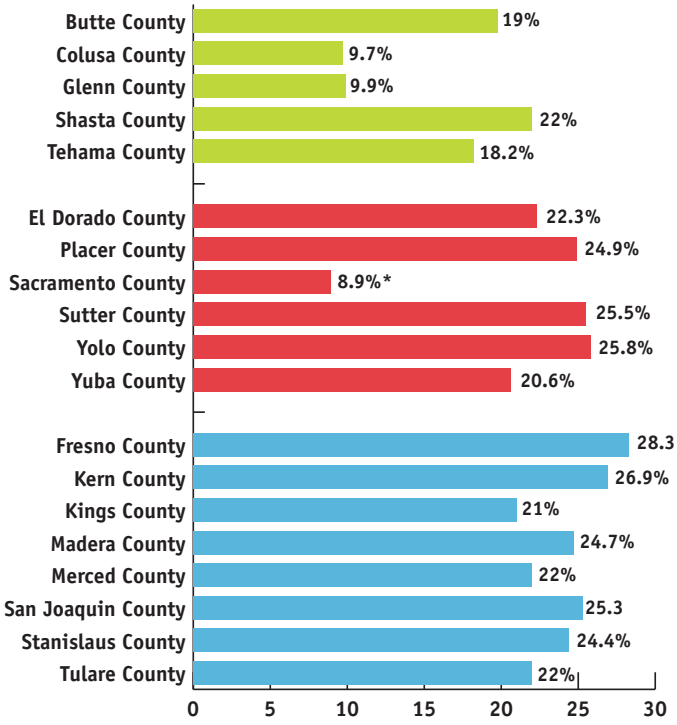
A major barrier to seeking and obtaining professional help is a general lack of public understanding and awareness of the importance of oral health. Those who suffer the worst oral health include poor Americans (especially children), the elderly, and those with disabilities and complex health conditions.

How are we doing?

In the Central Valley, 21.9% percent of Medi-Cal beneficiaries used their associated Denti-Cal dental insurance in 2004. This is lower than the statewide rate (26%).

Within the Central Valley, the San Joaquin Valley had rates (23%) below the California average while in the North Valley, 19.2% of Medi-Cal beneficiaries used their Denti-Cal services. It should be noted that Sacramento County is a geographical managed care county, so many Medi-Cal enrollees are in dental managed care plans and are not reflected in the data.

Percentage of Medi-Cal Enrollees who used Denti-Cal Services, 2004



Source: Denti-Cal Facts and Figures, California Health Care Foundation, 2007
www.chcf.org
*Sacramento County utilizes mandated managed care that may not appear in figures.

CHILDREN LIVING IN POVERTY

Wide variation between regions, five counties below state average.

Definition:

This indicator shows the percentage of related children under 18 below the poverty level in 2006.

The Census Bureau uses a set of money income thresholds that vary by family size and composition to determine who is in poverty. For example, if a family's total income is less than that family's threshold, then that family and every individual in it is considered "in poverty". In 2006, a family of four with two related children under 18, would be in poverty if their total combined income fell below $20,444.

The official poverty thresholds do not vary geographically, but they are updated annually for inflation using the Consumer Price Index (CPI-U). The official poverty definition uses money income before taxes and does not include capital gains or noncash benefits (such as public housing, Medicaid, and food stamps). It should be noted that some government aid programs use different dollar amounts as eligibility criteria.

Why is it important?

Children living in poverty typically are uninsured or underinsured and therefore may have limited access to health care.

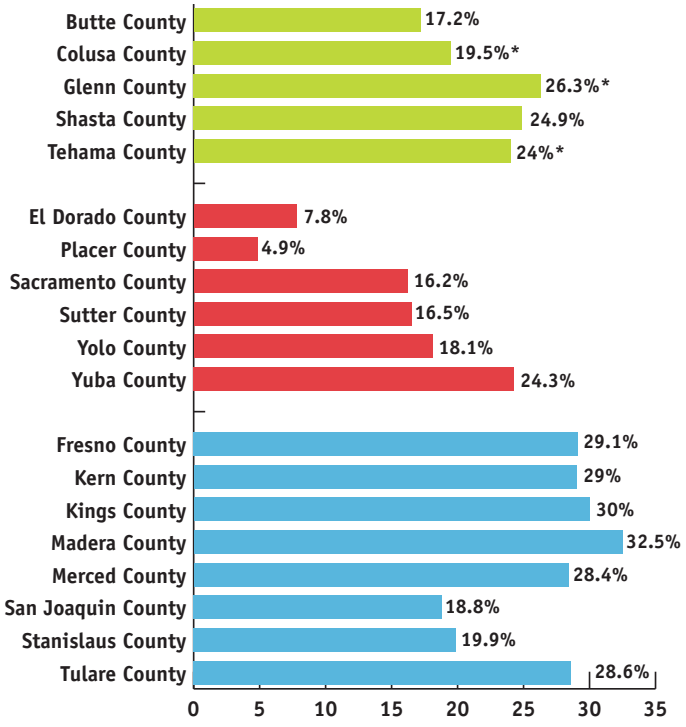
Poverty has been associated with increased risk of exposure to environmental hazards and toxins and increased risks to health due to lack of clean water, adequate sanitation, nutrition, and shelter. Children living in poverty who do not speak English as a first language and who do not have access to linguistically and culturally competent health care providers have an even greater difficulty accessing health care.

How are we doing?

According to the U.S. Census Bureau's 2006 American Community Survey, 17.7% of related children under 18 in California live below the poverty level. Within the Valley, the highest percentages of children under 18 living below the poverty level can be found in the South San Joaquin Valley while the lowest levels are found in El Dorado and Placer counties. Data for Colusa, Tehama and Glenn counties was not included in the 2006 American Community Survey, as such, Census 2000 data is shown.

As in 2003, rates of childhood poverty vary drastically between counties, with Madera County at 32.5% and Placer County at 4.9%.

Percentage of People Under Age 18 Living in Poverty by County, 2006



Source: US Census Bureau, American Community Survey 2006
*Tehama, Glenn and Colusa figures are from 2000 Census
www.census.gov

Maternal & Child Health

Early and continual prenatal care is vital to the health and survival of infants and to positive health outcomes later in their lives.

• Following state trends, a near universal decline in infant mortality was shown in much of the Valley.

• Babies born in the Valley are also generally in parity with their coastal counterparts with regards to birth weight. As in previous editions of this report, the North Sacramento Valley had the lowest percentage of low birth weight babies.

• The Valley has a high percentage of children entering kindergarten fully immunized. However, six counties fall below the state average.

• Although good progress has been made, utilization of prenatal care in the Valley continues to be an issue. At 19%, the Valley has the highest percentage of women not using prenatal care. This is a decline from 23% in the 2003 edition, and higher than the San Francisco Bay Area 12% rating.

INFANT MORTALITY

Decline throughout Sacramento Metropolitan Area and in five of eight San Joaquin Valley counties.

Definition:

This indicator shows the number of infant deaths during the first year of life in counties where there were more than 1,000 live births and five or more infant deaths.

Why is it important?

Infant mortality has traditionally been considered of great significance to public health. A high rate has been taken to indicate unmet health needs and unfavorable environmental factors—economic conditions, education, nutrition, sanitation, and access to health care.

The most prominent risk factors for infant death are the absence of prenatal care, low birth weight, poverty, birth to a teen-aged parent, air pollution, and cigarette smoking. Leading causes of death among infants are birth defects, sudden infant death syndrome (SIDS), unsafe housing, inadequate supervision, respiratory distress syndrome, and disorders related to short gestation

How are we doing?

In 2004, there were a total of 2,811 infant deaths and 544,685 live births among California residents for an infant mortality rate of 5.2. The 2004 infant mortality rate did not change from the rate in 2003. However, the 2004 rate decreased 1.9 percent from an average rate of 5.3 from 2000 to 2003.

Within the Valley, infant deaths declined or remained the same in every Sacramento Metropolitan Area county. In the San Joaquin Valley, infant deaths per 1000 declined in five of that region's eight counties. Progress for the entire North Sacramento Valley is difficult to gauge given that the number of births and deaths in Tehama, Glenn and Colusa County were below the level measured by the state. By comparison, infant mortality rates in the San Francisco Bay Area and the Los Angeles Region were 4.2 per 1,000 births and 5.2 per 1,000 births respectively.

Infant Mortality per 1,000 Births, 2001 and 2004

	2001	2004
Butte	4.3	5.9
Shasta	6.2	4.9
El Dorado	5.3	5.3
Placer	4.8	4.7
Sacramento	6.2	5.5
Sutter	6.0	5.2
Yolo	5.6	2.9
Yuba	6.7	5.1
Fresno	5.2	8.1
Kern	6.6	7.1
Kings	4.2	7.5
Madera	5.9	2.6
Merced	5.3	4.4
San Joaquin	7.2	6.7
Stanislaus	7.4	6.5
Tulare	6.6	4.0

Source: California Department of Public Health
www.cdph.ca.gov

LOW BIRTH WEIGHT INFANTS

North Sacramento Valley has fewest low birth weight infants

Definition:

This indicator shows the rate of babies born weighing less than 2500 grams (5.5 pounds) per 100 live births as a proportion of the total number of all babies born.

Why is it important?

Low birth weight is commonly used as an indicator of the general health of a population.

Infants born with low birth weight are more likely to develop problems in areas such as learning disabilities and motor skills; develop conditions such as epilepsy, cerebral palsy, and mental illness; and die within the first month of life compared with babies who are of normal weight.

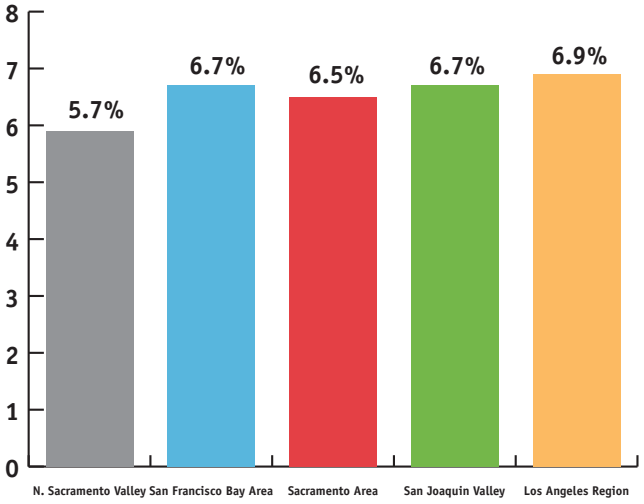
Low birth weight is associated with late or no prenatal care, poor maternal nutrition, lack of access to care, low socioeconomic status, maternal smoking, premature delivery, and other conditions.

How are we doing?

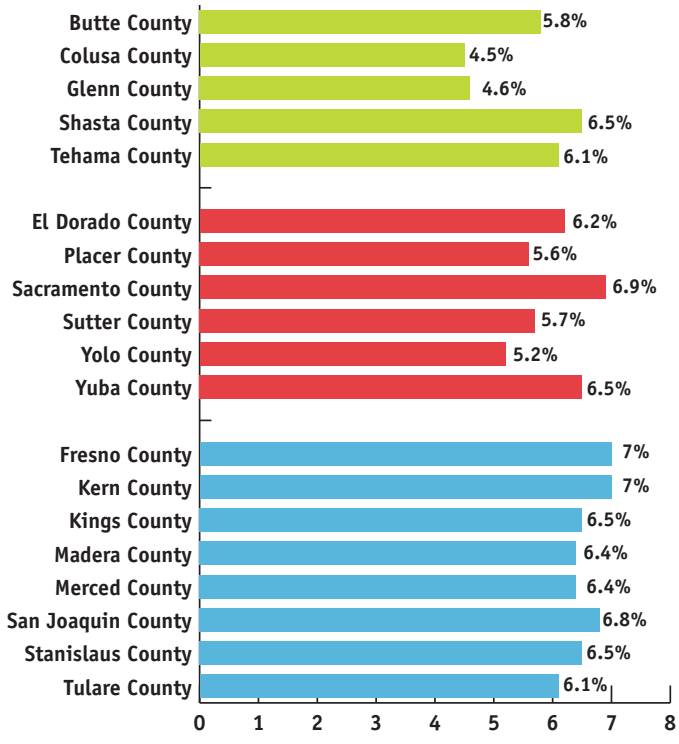
In 2004, the Central Valley had approximately the same percentage of low birth weight infants as the San Francisco Bay Area and the Los Angeles Region. All were just over 6%.

Averages over a three year period indicate that Shasta County had the highest percentage of low birth weight babies in the Central Valley (7.6%) and Colusa and Glenn had the lowest averages (about 4.5% and 4.6% respectively).

Percent of Low Birth Weight Babies per 100 Births by Region, 2004



Percent of Low Birth Weight Babies per 100 Births by County, 2004



Source: California Department of Public Health, 2007 County Profiles
www.cdph.ca.gov/programs/OHIR/Documents/Profiles2007.pdf

PRENATAL CARE

More Valley women receiving prenatal care.

Definition:

This indicator shows the percentage of women receiving late or no prenatal care as a three year average between 2003 and 2005. Late prenatal care is care beginning in the third trimester.

Why is it important?

Comprehensive prenatal care given during the first 12 weeks of pregnancy can significantly reduce risk of maternal morbidity and poor birth outcomes. Pregnant women who do not receive early prenatal care are much more likely to give birth to an infant suffering from consequences of low birth weight or prematurity.

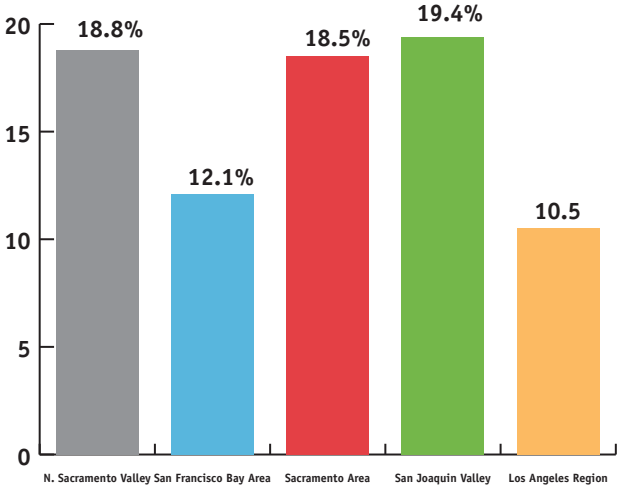
Health insurance and financial problems are among the most important barriers to receiving care during pregnancy, especially during the first trimester. Cultural beliefs and lifestyle factors are also considered barriers to accessing early prenatal care.

How are we doing?

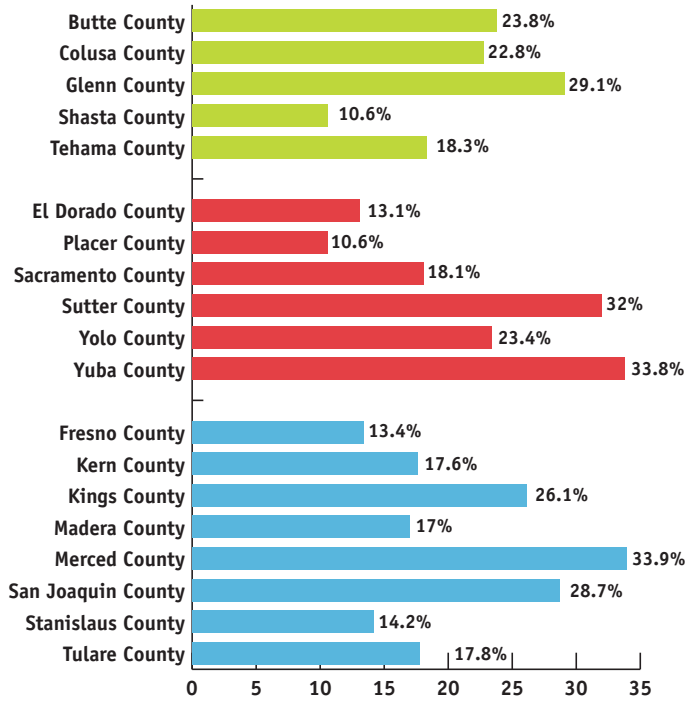
At just 19.12%, the Great Central Valley has the highest (worst) rate of women who are not receiving adequate early prenatal care. The San Francisco Bay Area has the lowest rate with 12.5% of mothers having late or no prenatal care. The Valley's showing is an improvement from the 23% rating identified in between 1996 and 2000.

Central Valley sub-regions fare equally poorly on this indicator, with rates approximately 6% to 8% greater than the Los Angeles Region and from the San Francisco Bay Area. Sixteen of the counties in the Central Valley experienced higher rates of lack of early prenatal care than the state average (13%). Counties in the Central Valley vary significantly.

Percentage of Women who Received Late or No Prenatal Care by Region, 2003-2005 Average



Percentage of Women who Received Late or No Prenatal Care by County, 2003-2005 Average



Source: California Department of Public Health, 2007 County Profiles
www.cdph.ca.gov/programs/OHIR/Documents/Profiles2007.pdf

CHILDHOOD IMMUNIZATION

Improvement seen in kindergarten immunizations.

Definition:

This indicator shows the percent of children who are up-to-date with required immunizations as of their second birthday and the time they entered kindergarten.

Why is it important?

Immunizations are a means of mobilizing the body's natural defenses against disease. They can prevent disability and death from vaccine-preventable diseases for individuals and can help control the spread of infections within communities.

Children must receive at least 15–19 doses of vaccine by age 18–24 months to be optimally protected against 11 vaccine-preventable childhood diseases.

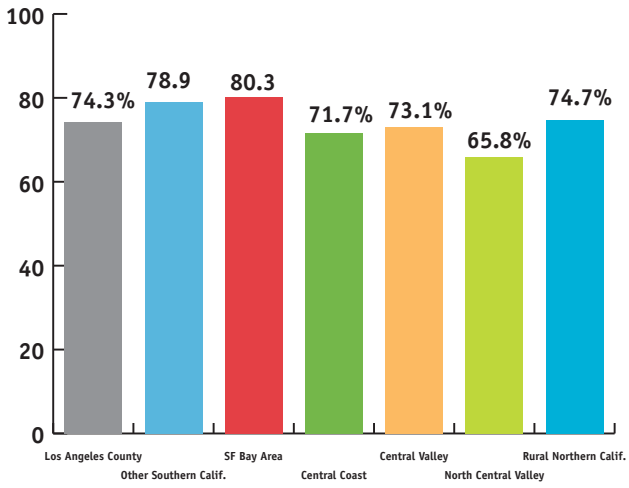
When children do not receive these important vaccines on time, their risk of developing a vaccine-preventable disease (if exposed) goes up significantly. This includes diseases such as Diphtheria, Whooping Cough, Measles, Mumps, Rubella, Chicken Pox, Polio, and Hepatitis B.

How are we doing?

At 73.1%, immunization rates for children at age 2 in the San Joaquin Valley fall below the national goal of 90%. The San Francisco Bay Area continues to lead the state with the highest rate (80.3%).

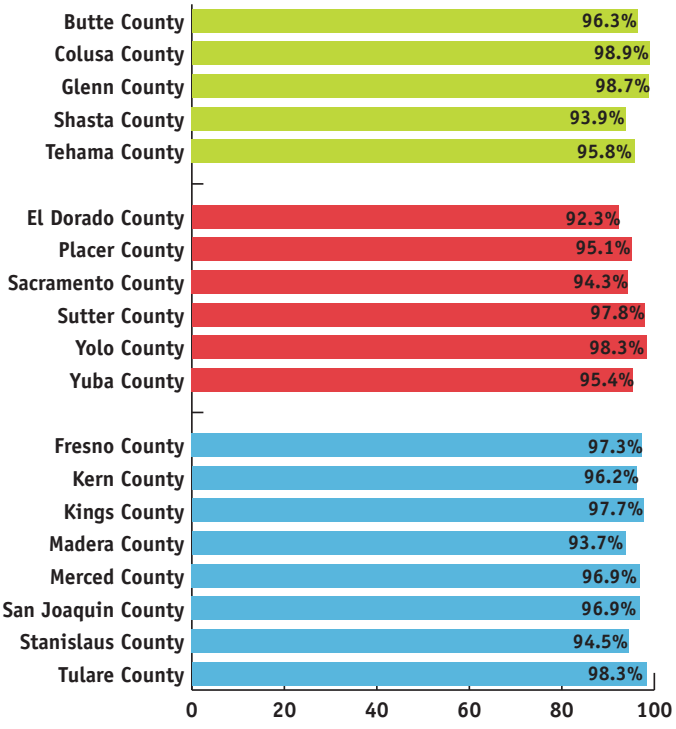
All regions in California exceed the Healthy People 2010 Objective for childhood kindergarten immunization. The Central Valley has a high percentage of children entering kindergarten fully immunized, although six counties (Stanislaus, Madera, Yuba, Sacramento, El Dorado, Tehama and Shasta) are slightly lower than the state rate (96%). This is an improvement from the 2003 edition when sixteen of the Valley's counties had lower percentages than the state's average.

Immunization Rates for Children Age 0-2, 2007



Source: California Dept. of Public Health, Immunization Unit
www.dhs.ca.gov/ps/dcdc/izgroup/pdf/KRS07Final.pdf

Immunization Rates for Children at Entry into Kindergarten, 2006



Source: California Department of Public Health, Immunization Branch
www.dhs.ca.gov/ps/dcdc/izgroup/pdf/KRS07Final.pdf

The Health Imperative of Our Time

Preventing Chronic Diseases

Dr. Richard H. Carmona, M.D., M.P.H., FACS

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In my work, I am often asked, "What is the most important health issue in our nation?" The answer is never singular or simple, because regardless of geographic location, multiple factors exist, including rising health care costs, lack of access to quality health care, and health disparities. However, one factor that crosses over all these issues is the tremendous burden of chronic disease.

Today, more than 130 million Americans suffer from chronic diseases, and of the total deaths that occur in our nation, seven of 10 are due to a chronic illness. Cancer, diabetes, asthma, Alzheimer's disease, hypertension, and other chronic illnesses contribute to astounding health care costs in California and across our nation. In California, the economic cost of chronic diseases is $133 billion every year. Our nation spends over $2 trillion on health care each year with 75 cents of each of those dollars going to the treatment of chronic disease. Less than $10 per person per year is spent to prevent diseases.

The fact is, if we continue with a treatment-oriented health care system, the disease burden and the economic burden will continue to mount. Even more people will develop preventable chronic diseases, productivity in the workplace will decline further, quality and quantity of life will diminish, insurance costs will rise, and the overall economic costs to our families and nation will increase. The trajectory of these burdens is both unsustainable and preventable. We need a national cultural transformation to shift our treatment-oriented society to one that promotes prevention and helps everyone achieve optimal health and wellness.

The good news is that we can improve the state of health in our nation. Most of the chronic illnesses impacting our families and communities are preventable by some relatively simple steps: maintaining a healthy weight through healthy eating, being physically active, and choosing to not smoke. We have a long way to go in these areas: tobacco use is still the single most preventable cause of death and disease, causing over 440,000 deaths each year. And now, obesity-related illness is the fastest-growing killer of Americans.

The need for "Health Literacy"

One of the first steps in promoting prevention is to recognize the need for a basic infrastructure that promotes an understanding of why healthy choices are important. Unfortunately, deficits in health literacy — defined as the ability of an individual to access, understand, and use health-related information and services to make appropriate health decisions — coupled with a societal perspective that values disease treatment over disease prevention has led to the significant decline in our overall health over the past several decades.

Though we have made great strides in medical discovery, a lack of health literacy can keep us from living more healthy and productive lives. We struggle as a society to understand the complexities of today's modern medical community. Each day there are published reports of new treatments, advances, and breakthroughs. However, many people lack an understanding of how these medical innovations will help us and how we can make informed decision about our health. Low health literacy is not limited to small pockets of our nation. More than 90 million Americans have difficulty in understanding basic health information. That results in increased complications and cost of health care.

Communication and cultural barriers between patients and health care professionals can exacerbate health literacy problems and impact people's ability to make informed decisions. As a poor Latino kid growing

up in New York City, I witnessed first hand the consequences of low health literacy. Many people in my neighborhood did not understand the importance of primary prevention through healthy eating, exercise, and preventive medical care.

Linguistic barriers added another layer of complexity. Fortunately, because my abuelita — my grandmother, the matriarch of my family — found a local doctor who spoke our language and understood our culture, we were able to better understand what we should do to protect our health as individuals and as a family. Yet, for many Americans, cultural and linguistic barriers contribute to less access to care, lower quality of care, and poorer health status and outcomes.

These barriers can have a direct effect on how a patient perceives and acts on health information. I learned that firsthand 37 years ago. I was a young U.S. Army Special Forces medic working with Montagnard villagers in a remote area of Vietnam. On one of my first medical visits to the village, I saw the village chief's granddaughter, a young girl whose arms were covered with what I recognized as impetigo. I gave the villagers a little bottle of Phisohex so that the girl could wash her arms twice a day, and I also gave them antibiotic pills for her. I told them to give the girl one pill four times a day until I returned to check on her in a week.

Barriers can have a direct effect on a how a patient perceives and acts on health information.

When I returned, the little girl was healing. The village chief thanked me for all I was doing for his people and for the gift I had given them. He then proceeded to show me a small box, containing a necklace made of 28 pills — exactly the pills I had given them for the girl earlier. Our interpreter informed me that when people in the village became ill, they would now wear the necklace to ward off the disease.

The Montagnard villagers had no context to understand what I was telling them about health and disease treatment. They had no idea what questions to ask because they had never seen a pill. To them, a pill looked like a medicine bead, and so they treated the pills as beads. I thought that I was being clear about what the pills were for and how to use them, but obviously I was not. That was my first and perhaps best lesson in the importance of health literacy and cultural competence, although I didn't know it at the time. I still think of this incident as a great example of the importance of culturally and linguistically competent approaches to health and wellness.

Improving Health Literacy through partnerships

Improving health literacy and making the cultural shift to prevention over treatment will take the efforts of communities, leaders, employers, caregivers, families, and individuals working together. We must partner with community health advocates, lay health educators, trained interpreters, and patient navigators who can help facilitate the health care experience. All of us can contribute to improvements in quality of care, health outcomes, and health status; can increase patient satisfaction; and can enhance or ensure appropriate health care resource utilization.

While health communication alone cannot change systemic problems related to health — such as poverty, environmental degradation, or lack of access to health care — comprehensive health programs must clearly communicate health information to populations across our diverse nation.

To prevent disease we must all embrace a culturally competent approach to health and wellness. Change will be incremental and likely require a multi-generation commitment. Still, the transformation cannot wait. It must begin today, first by each person gaining awareness and making better choices for themselves and encouraging their family members to do so, too.

Next, activities and organizations in communities that are working to create safe places for family recreation, increase the availability and use of healthy foods, and educate citizens about health and wellness deserve our support and encouragement. Businesses can participate in the movement through workplace wellness programs for their employees. State and national governments will continue to be faced with opportunities to impact the future by the decisions and resource allocations they make.

Through a sustained, multi-level effort, the voice of one will become the will of many and together we will create a future that holds not just the promise of health for some but the reality of health for all.

Senior Health

Falls or illnesses that are almost routine for many can be life threatening to people 65 and older.

• Immunization levels are down from 70% in 2001. The Central Valley has a slightly reduced percentage of adults age 65 years and older who reported receiving an influenza immunization in 2005 (63.3%) when compared to adults in the San Francisco Bay Area (69.5%), California (65.7%), and the Los Angeles Region (64.1%).

• The North Sacramento Valley's nonfatal hospitalized falls is slightly higher than all other regions.

• At 44.6%, the Central Valley has a higher level of senior disability when compared to California (41%).

INFLUENZA IMMUNIZATION

At 63.3%, reduced reportage of immunizations; down from 70% in 2001.

Definition:

This indicator shows the percentage of people age 65 and older who reported receiving an influenza (flu) shot.

Why is it important?

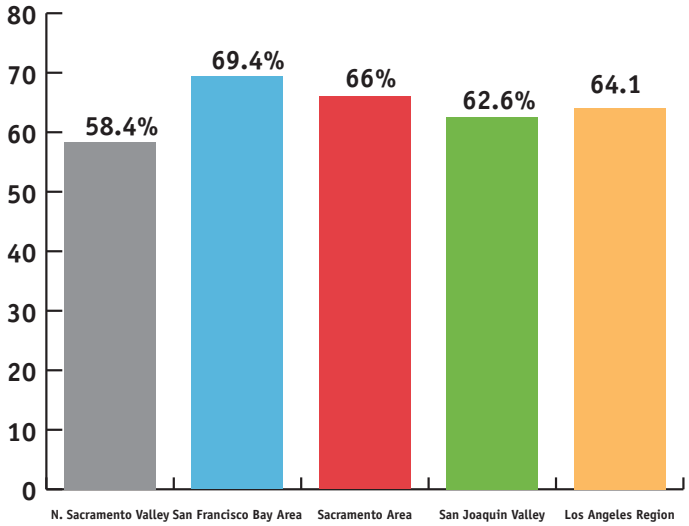
Influenza is a contagious respiratory illness caused by a virus. It is one of the most common and deadly diseases affecting people age 65 and older in the United States. Influenza vaccines can prevent up to 60% of hospitalizations and up to 80% of deaths from influenza related complications.

Medicare has covered the cost of influenza immunizations since 1993. Influenza immunizations are typically widely available in clinics, drugstores, health fairs, and senior centers throughout the flu season.

How are we doing?

The Central Valley has a slightly reduced percentage of adults age 65 years and older who reported receiving an influenza immunization in 2005 (63.3%) when compared to adults in the San Francisco Bay Area (69.5%), California (65.7%), and the Los Angeles Region (64.1%). To meet the National Healthy People 2010 Objective (90%), more seniors need to be immunized in the Central Valley. The North Valley and the San Joaquin Valley had rates of immunized older adults (58.4% and 62.6%, respectively) lower than the Sacramento Metropolitan Area at 66.2%. When compared to all counties in the Central Valley, Yolo County has the highest (best) percentage of older adults who reported receiving an influenza immunization in the past 12 months (84%). At the other end of the spectrum, Shasta and Kern counties had the lowest rates at 54.8% and 55.2%. rates at 54.8% and 55.2%.

Adults Age 65 or Older Who Have Had Flu Shot in Past 12 Months, 2005



Source: California Health Interview Survey, 2005
www.chis.ucla.edu

NON-FATAL FALLS

Central Valley fall hospitalizations slightly higher.

Definition:

This indicator shows unintentional falls as the percentage of nonfatal injuries requiring hospitalization for people 65 and older in 2005.

Why is it important?

Falls are an injury endemic of old age. One of every three older Americans fall each year.

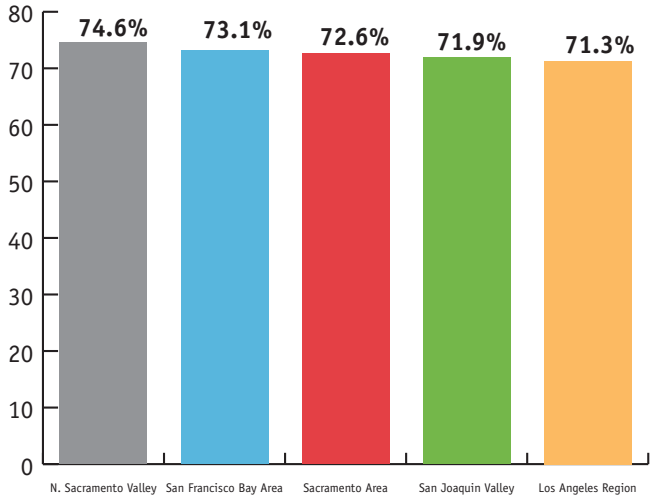
Falls are the second leading fatal injury (behind suicide) among Californians age 65-74 and the leading cause for Californians over 74.

For people age 65 and older, falls can result in moderate to severe injuries that reduce mobility and independence, and increase the risk of premature death. The total direct medical cost of all fall injuries among people 65 and older in 2000 was more than $19 billion. Given the growing population of this age group, this cost is expected to reach $43.8 billion nationally by 2020 according to the Center for Disease prevention. Of all fall-related injuries, hip fractures not only cause the greatest number of injury deaths, but they also lead to the most severe health problems and reduced quality of life.

How are we doing?

The rate of all nonfatal hospitalized falls in the San Joaquin Valley and the Sacramento Metropolitan Region is slightly lower than the than the San Francisco Bay Area rate (73.1%). As in previous years, the North Sacramento Valley has a higher percentage of people age 65 and older who have been hospitalized for falls (74.6%) than anywhere else, including the Bay Area.

Percentage of all Reported Nonfatal Hospitalizations for Patients 65 and Older Related to Falls, 2006



Source: California Dept. of Public Health, Epidemiology and Prevention for Injury Control Branch (EPIC)
www.applications.dhs.ca.gov/epicdata/content/sum_causebyage.htm

NON-INSTITUTIONALIZED PEOPLE LIVING WITH A DISABILITY

San Joaquin Valley subregion has more seniors with disabilities.

Definition:

This indicator shows the percentage of non-institutionalized people 65 years of age and over that reported having a disability in 2006.

Why is it important?

People with disabilities tend to report more anxiety, pain, sleeplessness, and days of depression and fewer days of vitality than do people without activity limitations.

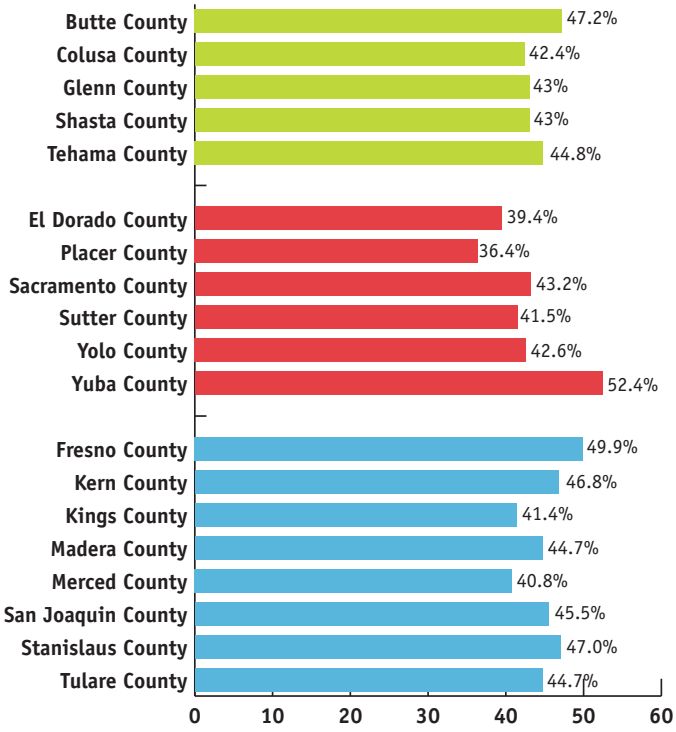
People with disabilities also have other disparities, including lower rates of physical activity and higher rates of obesity.

Many people with disabilities lack access to health services and medical care and some may even require personal assistance. It is important for these people to have access to care to help them live independently at home and avoid confinement in a costly institutionalized setting.

How are we doing?

Even with a slight decrease from 2000, at 44.6%, the Great Central Valley has a higher (worse) level of senior disability when compared to California (41%). Within the Valley, the San Joaquin Valley has close to half (46.5%) of its non institutionalized people age 65 and older experiencing disabilities. The North Valley is lower at 45% and the Sacramento Metropolitan Area is just above state rate at 41.7%. Central Valley counties exhibit disability rates among people age 65 and older that vary from Yuba County having the highest rate (52.4%) and El Dorado and Placer counties having the lowest rates (39.4% and 36.4% respectively).

People Age 65 and Older Living with a Disability, 2006



Source: U.S. Census Bureau, American Community Survey, 2006
www.census.gov.

Chronic & Communicable Diseases

A chronic disease is a slowly progressing disease that can be severely debilitating (and can eventually lead to death) and occurs over a long duration of time. A communicable disease is one that may be transmitted directly or indirectly from one individual to another.

• Every San Joaquin Valley county exhibits higher rates of coronary heart disease deaths than the state (163.1 deaths per 100,000) but the North Valley has a substantially lower rate at 147.16 deaths.

• Fifteen of the Valley's 19 counties did not meet the Healthy People 2010 national goal or state average for stroke related deaths.

• The Central Valley has the highest death rate due to diabetes among the regions being compared, though differences on the regional level are slight.

• The North Valley (237.2) has a lower chlamydia incidence rate than both the Sacramento Metropolitan Area (244.6) and much lower than the San Joaquin Valley (438.9).

ASTHMA

Asthma incidence greater in the Central Valley. Rates poor for San Joaquin Valley children.

Definition:

This indicator shows the percentage of the California Health Interview Survey population who reported that they had been diagnosed with asthma and had experienced asthma symptoms in 2005.

Why is it important?

Asthma adversely affects the quality of life of both the person with asthma and his or her family. It often causes restrictions of many activities in which they participate, many nights of lost sleep, a disruption in daily routines, and is frequently associated with lost days of school and work. It is the leading serious chronic disease of childhood and among the most common cause for emergency room visits and hospitalizations of children.

Asthma is a chronic inflammatory lung disease characterized by recurrent episodes of breathlessness, wheezing, coughing, or chest tightness. These symptoms can range from mild to life-threatening. Numerous studies associated with these guidelines have demonstrated that using medications and reducing exposure to environmental triggers can reduce the frequency and severity of asthma symptoms and the associated visits to the emergency room and hospital. Although asthma affects Americans of all ages, races, and ethnic groups, children, low income, and minority populations are particularly affected.

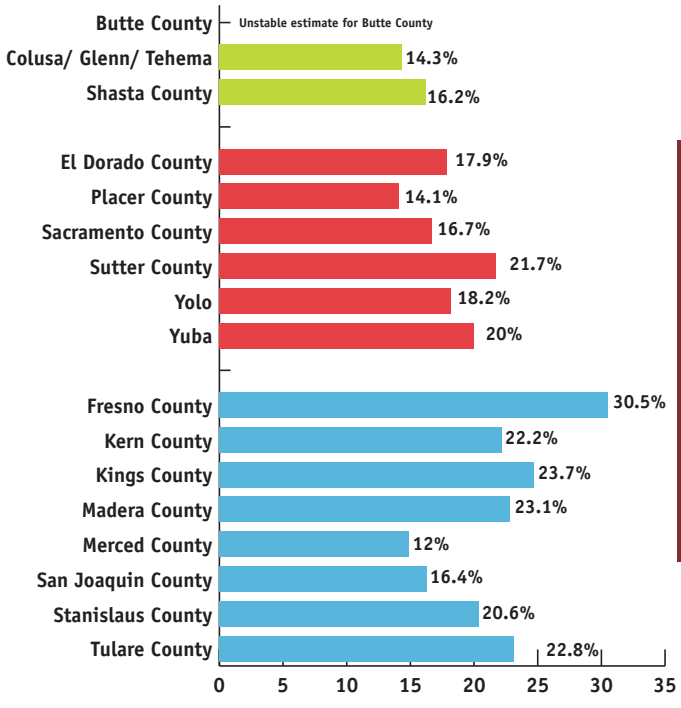
How are we doing?

Children Age 0–17 years: The San Joaquin Valley and the Sacramento Metropolitan region have higher asthma diagnosis among children age 0-17 (22.3% and 16.9%) when compared to the San Francisco Bay Area (17.4%), the state (16.1%), and the Los Angeles Region (14.8%). The North Valley fares best at 13.1%. Fresno County (30.5%) has double the child diagnosis rate of Placer County (14.1%).

People 18 Years and Older: The adult asthma diagnosis rate for Great Central Valley regions is slightly higher for the North Valley, Sacramento Metropolitan and the San Joaquin Valley, (14.9%, 17.6% and 14.8% respectively), than the San Francisco Bay Area (approximately 13.5%) and the Los Angeles Region (11.3%). All of the Great Central Valley counties have higher prevalence rates than the state average, and all but one have higher rates than the San Francisco Bay Area. Madera County has the highest diagnosis rate (19.4%).

All Ages: When looking at the entire population, asthma diagnosis rates in all Central Valley subregions are higher than that of the San Francisco Bay Area (14.4%) and the Los Angeles Region (12.2%) and the state average of 13.6%.

Respondents Reporting Children Ages 0-17 Have Ever Been Diagnosed with Asthma, 2005



Source: California Health Interview Survey, 2005
According to the data advisory from CHIS, there are too few respondents in Butte County to report a finding.
www.chis.ucla.edu

DIABETES

Central Valley highest in diabetes deaths.

Definition:

This indicator shows the death rate per 100,000 people attributed to diabetes in California between 2003 and 2005.

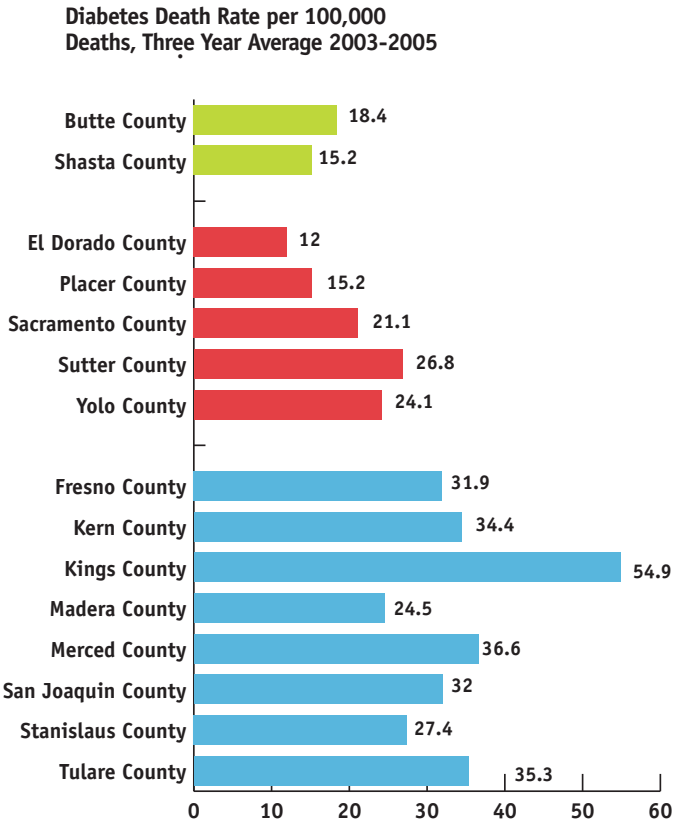
Why is it important?

Overall, the risk for premature death among people with diabetes is about two times that of people without diabetes.

Studies have shown that medications and lifestyle changes can prevent or delay the onset of type 2 diabetes among high-risk adults. People with diabetes can take steps to control the disease and lower the risk of complications and premature death. The increased risk associated with diabetes disproportionately affects younger adults (aged 25 to 44 years) and women. Hispanic/Latino Americans are almost twice as likely to have diabetes than non-Hispanic whites of similar age. Mexican Americans and non-Hispanic blacks are more likely to have diabetes than non-Hispanic whites of similar age. Many people who die with diabetes do not have this disease entered on their death certificate. Therefore, the reporting of the true death rate due to diabetes, as recorded in death certificates, may underestimate the mortality associated with diabetes.

How are we doing?

The Central Valley has the highest death rate due to diabetes among the regions being compared, though differences on the regional level are slight. The San Joaquin Valley death rate (34.6 deaths per 100,000) is significantly higher than other subregions. The North Valley (16.8) and the Sacramento Metropolitan Area (19.84) rate lower on this indicator. Fifteen of the counties in the Central Valley have higher death rates due to diabetes when compared to the San Francisco Bay Area (18.4). Kings County has the highest death rate at approximately 54.9 deaths per 100,000 people while El Dorado and Shasta have the lowest diabetes death rates (approximately 12 and 15 deaths per 100,000 people). Note: Yuba, Sutter, Glenn, and Colusa counties were removed due to data that was missing or otherwise unreliable.



Source: California Department of Public Health, 2007
www.cdph.ca.gov/programs/OHIR/Pages/CHSP.aspx
Yuba, Tehama, Glenn, and Colusa Counties not included due to unreliable data.

CANCER

Higher rates in the Sacramento Valley

Definition:

This indicator shows the death rate attributed to all forms of cancer in California between 2003 and 2005.

Why is it important?

Cancer mortality rates are affected by changes in cancer incidence, screening, diagnosis, treatment, and survival. Mortality trends are a fundamental measure of the success of cancer control efforts. Cancer is the leading cause of childhood death in California.

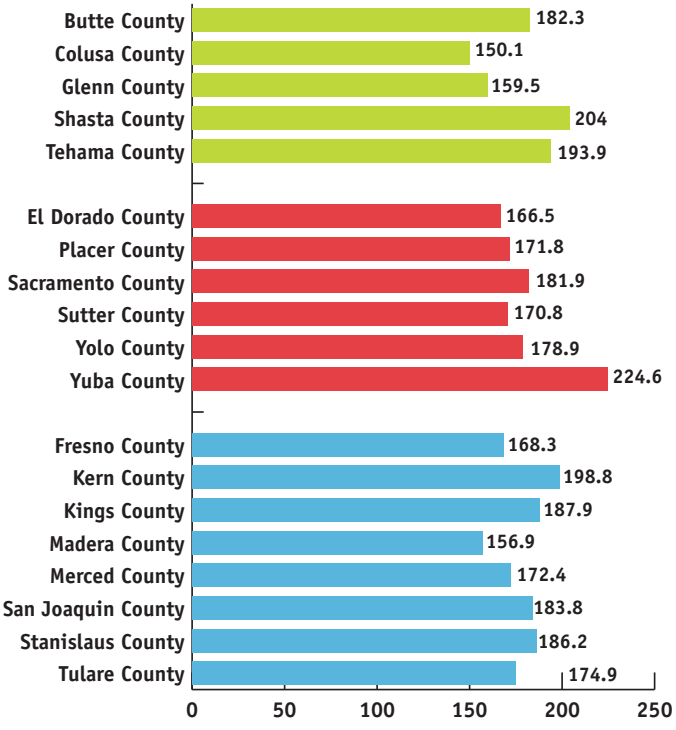
The rates of many common cancers have decreased significantly since 1990, both in California and nationally; however, cancer remains the second most common cause of death among all race and ethnic groups in California. Breast and prostate cancer are the most commonly diagnosed cancers, but lung cancer kills more people than breast, prostate, colon, and rectum cancer combined. Together these four cancers account for more than half of all cancer diagnoses and deaths. Overall cancer death rates are decreasing largely because fewer people are smoking, thereby reducing lung cancer death rates, the most common cause of cancer-related deaths in California.

How are we doing?

Although in decline, Great Central Valley cancer death rates continue to be higher than California (165.1), the Los Angeles Region (166.3), and the San Francisco Bay Area (178.65.)

The North Valley and the Sacramento Metropolitan Area have much higher cancer death rates (178.6 and 182.4 per 100,000, respectively), when compared to other regions. Of Central Valley sub-regions, the North Sacramento Valley has the lowest cancer death rate (177.9). At the county level, cancer death rates vary widely, with Yuba County having the highest rate at 224 deaths and Colusa, Madera and Glenn counties having the lowest death rates.

Three Year Average of Cancer Death Rates (all forms) per 100,000 People, 2003-2005



Source: California Department of Public Health, 2007 County Profiles
www.cdph.ca.gov/programs/OHIR/Pages/CHSP.aspx

CORONARY HEART DISEASE

Lowest rates of coronary heart disease found in the North Sacramento Valley. San Joaquin Valley rates higher than state average.

Definition:

This indicator shows the average age adjusted death rate per 100,000 people attributed to coronary heart disease in California between 2003 and 2005.

Why is it important?

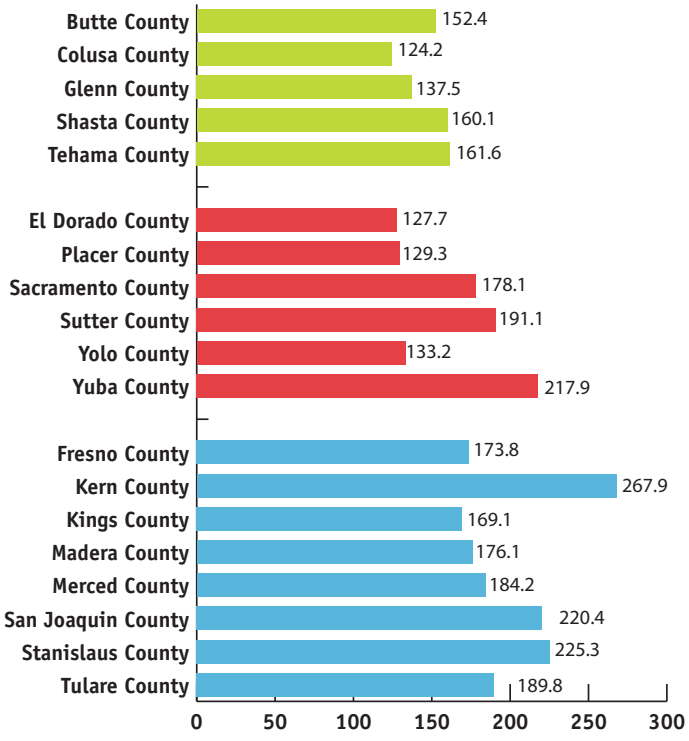
Coronary heart disease is the leading cause of death among men and women in California. It results from the coronary arteries becoming narrowed with fatty deposits on the inside wall. This narrowing reduces flow of blood to the heart and increases the chance of a blood clot blocking the artery, resulting in a heart attack. Women are much more likely to die from a first heart attack than men. White males and African American males and females have had a disproportionately higher risk of being hospitalized for this disease than other race/ethnic groups in California.

A 2008 report from the American Heart Association estimates that 16 million Americans suffer from coronary heart disease. The true prevalence of this disease in California is not known because many people do not become symptomatic, or know they have coronary heart disease, until they have a heart attack. The majority of people go on to live their lives affected by conditions such as shortness of breath, difficulty walking short distances, or difficulty with performing simple activities of daily living (i.e. preparing a meal). These symptoms contribute significantly to disability associated with coronary heart disease. Many deaths could be prevented because coronary heart disease is related to certain lifestyle-related risk factors. These include high blood pressure, high blood cholesterol, smoking, diabetes, obesity, and physical inactivity—all of which can be controlled.

How are we doing?

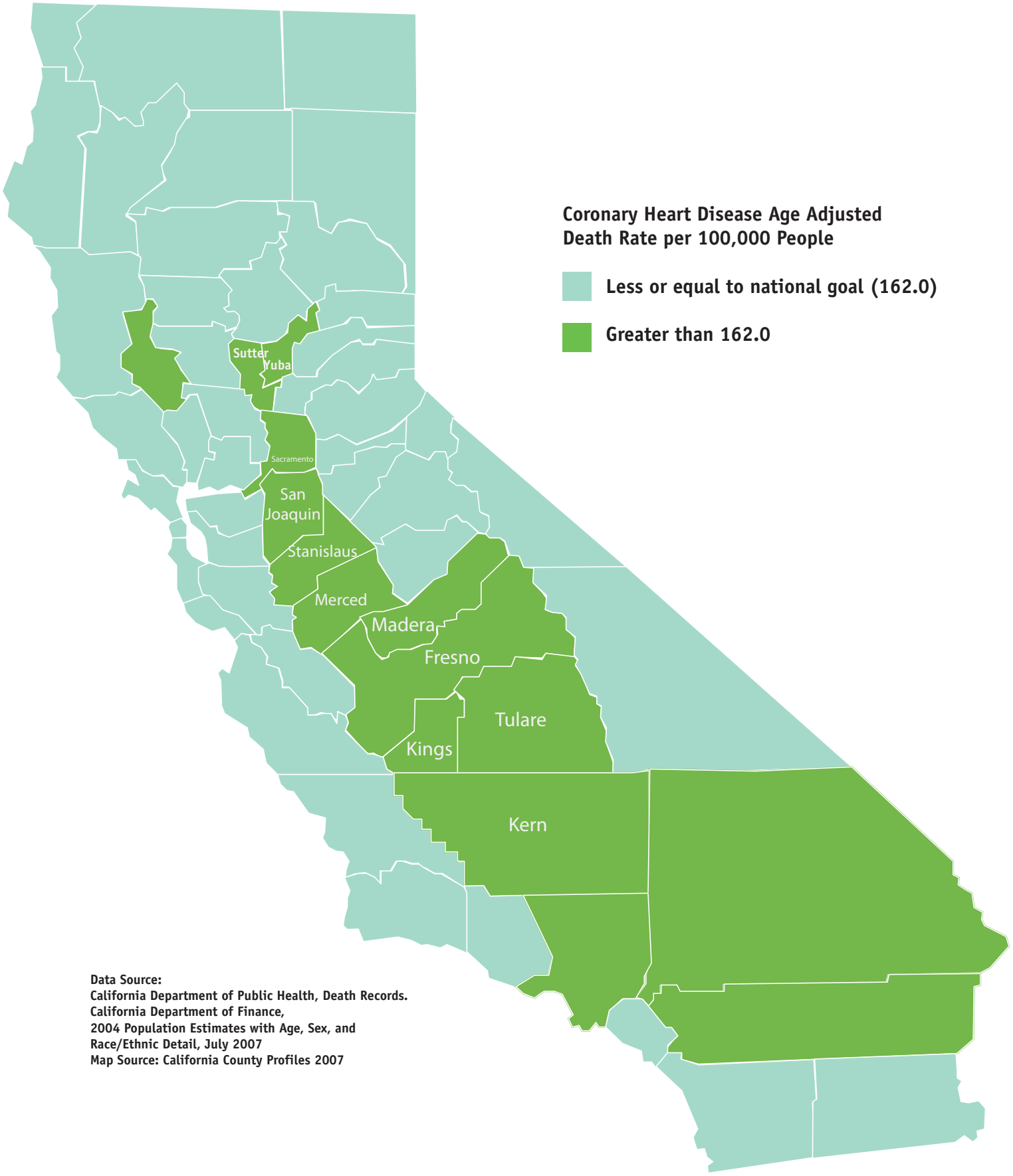
Valley wide, every San Joaquin Valley county exhibits higher rates of coronary heart disease deaths than the state average (163.1 deaths per 100,000). The North Valley has a substantially lower rate at 147.16 deaths. Every county in the North Sacramento Valley fared better than the state average. Kern has the highest, in the state and the Valley, (approximately 267.9 deaths) while Colusa County has the lowest coronary heart disease related death rate (124.2) in the Valley.

Age-Adjusted Death Rate per 100,000 deaths for Coronary Heart Disease, 2003-2005



Source: California Department of Public Health, 2007
www.cdph.ca.gov/programs/OHIR/Pages/CHSP.aspx

DEATHS DUE TO CORONARY HEART DISEASE, 2003-2005



Data Source:
California Department of Public Health, Death Records.
California Department of Finance,
2004 Population Estimates with Age, Sex, and
Race/Ethnic Detail, July 2007
Map Source: California County Profiles 2007

AIDS

Low diagnosis rates in Valley.

Definition:

This indicator shows the number of AIDS diagnoses between 1996 and 2006.

Why is it important?

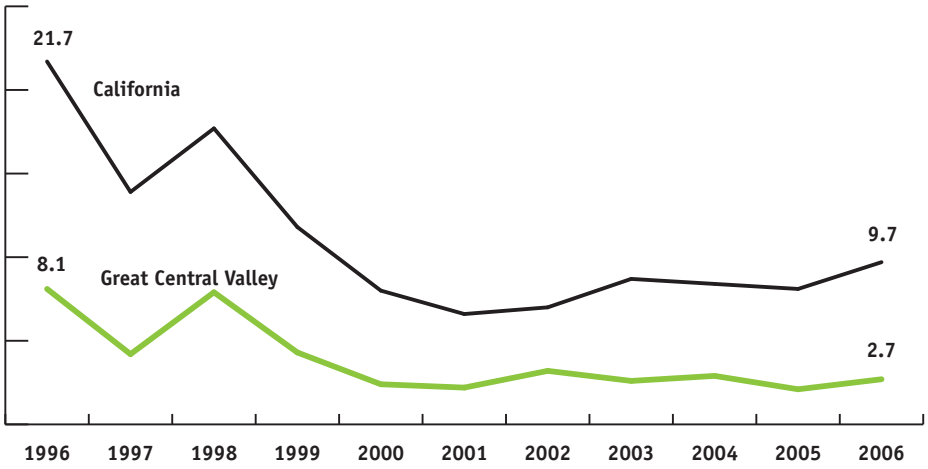
Even though drug therapies have led to the decline in AIDS-related deaths, HIV/AIDS continues to be a serious public health threat in California and the nation.

The risk groups and populations most affected by the HIV/AIDS epidemic are changing. Recent surveillance data indicates that although white men who have sex with men continue to represent the majority of reported AIDS cases each year, the proportion of new AIDS cases among people of color (including men who have sex with men), injection drug users and their sex partners, and women (especially African American and Latina women) are increasing.

How are we doing?

The Central Valley experiences a much lower AIDS diagnosis rate than both the state as a whole and other sub-regions in the state. The Valley rate of diagnosis has been in single digits since 1996. This may be due to AIDS patients seeking treatment outside the region.

AIDS Diagnoses per 100,000 People, California and Great Central Valley, 1995-2006



Source: RAND California Database using data from the Office of AIDS, California Department of Health Services
www.ca.rand.org

TUBERCULOSIS

Only one Valley county outpaces state average.

Definition:

This indicator shows the number of people diagnosed with tuberculosis between 2003 and 2005.

Why is it important?

Tuberculosis (TB) is a disease caused by bacteria called Mycobacterium tuberculosis. The bacteria usually attack the lungs. But, TB bacteria can attack any part of the body such as the kidney, spine, and brain. If not treated properly, TB disease can be fatal. TB disease was once the leading cause of death in the United States.

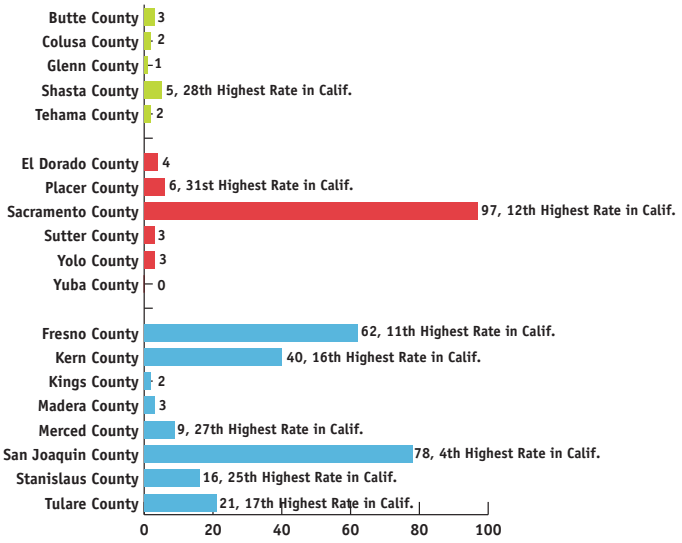
TB is spread through the air from one person to another. The bacteria are put into the air when a person with active TB disease of the lungs or throat coughs or sneezes. People nearby may breathe in these bacteria and become infected. However, not everyone infected with TB bacteria becomes sick. People who are not sick have what is called latent TB infection. People who have latent TB infection do not feel sick, do not have any symptoms, and cannot spread TB to others. But, some people with latent TB infection go on to get TB disease. People with active TB disease can be treated and cured if they seek medical help. Even better, people with latent TB infection can take medicine so that they will not develop active TB disease.

In 2007, a total of 13,293 tuberculosis (TB) cases were reported in the United States; the TB rate declined 4.2% from 2006 to 4.4 cases per 100,000 population. The TB incidence rate in 2007 was the lowest recorded since national reporting began in 1953. Despite this overall improvement, progress has slowed in recent years; the average annual percentage decline in the TB rate slowed from 7.3% per year during 1993-2000 to 3.8% during 2000-2007. Foreign-born persons and racial/ethnic minorities continued to bear a disproportionate burden of TB disease in the United States. In 2007, the TB rate in foreign-born persons in the United States was 9.7 times higher than in U.S.-born persons.

How are we doing?

By number of cases, Sacramento, San Joaquin and Fresno Counties lead the region in TB diagnoses. However, the rate of diagnosis in San Joaquin County (11.5 per 100,000) puts it in the top 10 for the state and exceeds the state rate of 7.4. Fresno (6.9), Sacramento (6.8), Kern (5.3), and Tulare (5.1) constitute the remaining top five Central Valley areas for TB.

Reported Cases of Tuberculosis, 2006 and State Rank according to Rate per 100,000



Source: California Department of Public Health, Report on Tuberculosis, 2006
www.cdph.ca.gov/data/statistics/Pages/TuberculosisDiseaseData.aspx

CHLAMYDIA

Large increases in San Joaquin Valley, especially Kern and Fresno.

Definition:

This indicator shows the number of people who have been diagnosed with chlamydia per 100,000 people.

Why is it important?

Chlamydia is a sexually transmitted disease. It is by far the most commonly reported communicable disease in California and is the leading cause of infertility in women. The state average for the study period is 336.8 cases per 100,000 people, up from 2002.

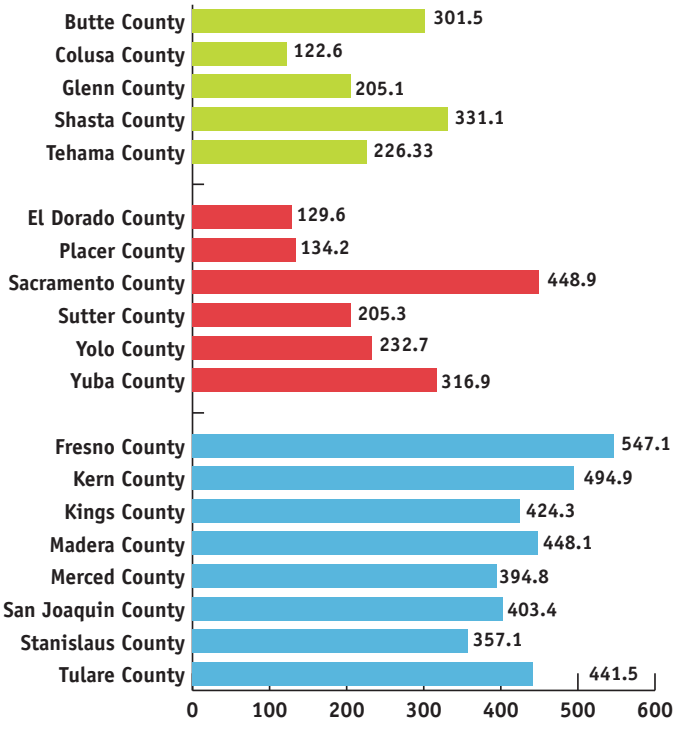
Chlamydia crosses all ethnic, economic and social class lines, and geographic regions. Up to 70% of women and 50% of men with Chlamydia have no detectable symptoms; therefore, case detection is based primarily on screening done by health care providers. Of those who have been screened for chlamydia in California, the incidence is highest in young adults (ages 20–24).

A simple urine test can be used to test for the disease and readily available antibiotics effectively treat chlamydia. Prevalence monitoring of chlamydia only represents rates among people who access testing. The true prevalence of chlamydia is not known due to incomplete screening coverage of at-risk populations, under-reporting of infections by medical and laboratory providers, and presumptively treated infections that are not confirmed by testing.

How are we doing?

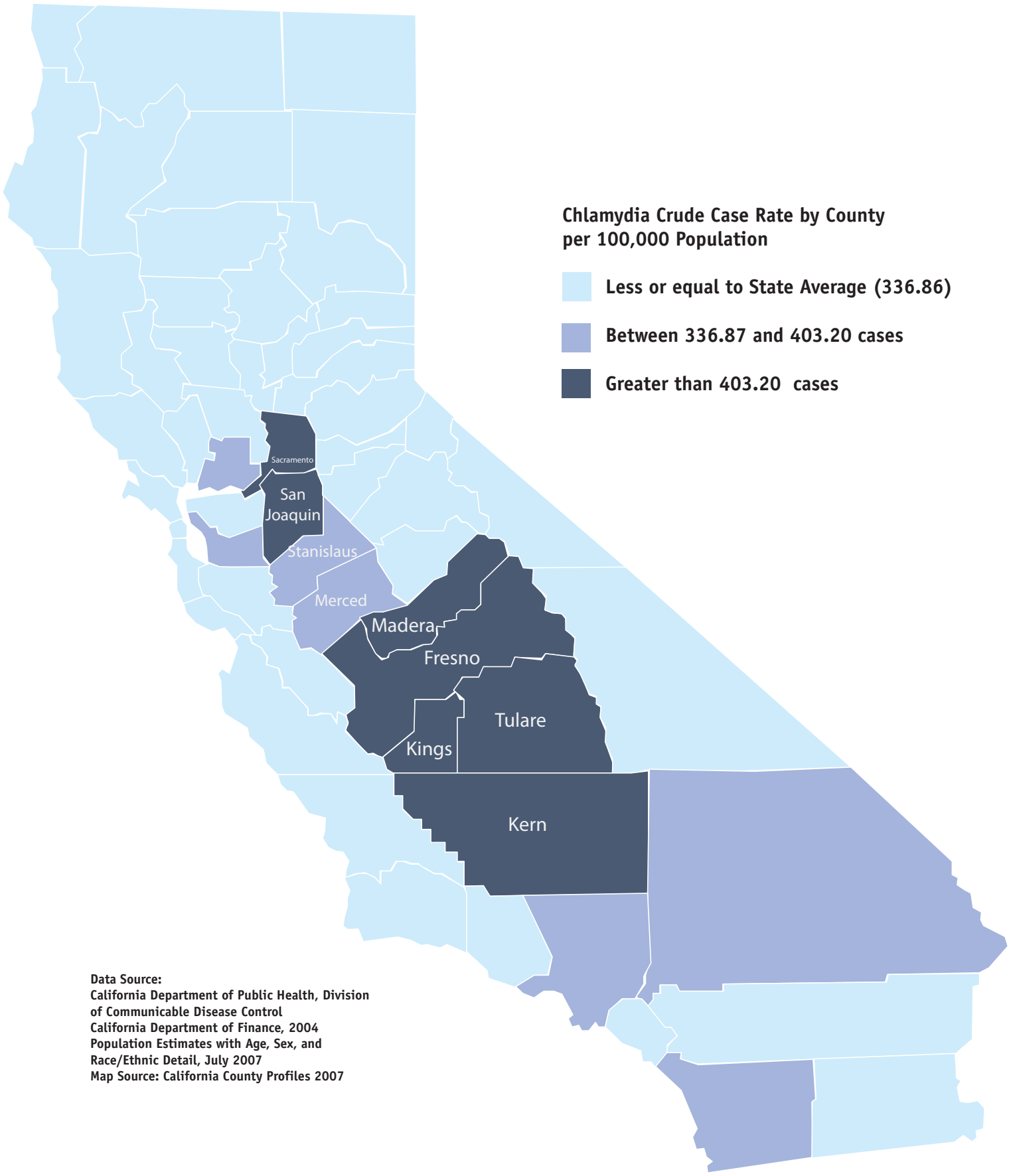
The North Sacramento Valley (237.2) has a lower chlamydia incidence rate than both the Sacramento Metropolitan Area (244.6) and much lower than the San Joaquin Valley (438.9). The Central Valley experiences a wide range of chlamydia incidence rates with El Dorado (129.6) and Colusa (122.6) counties having the lowest rates, while Kern (494.9) and Fresno (547) counties have the highest in the state. The Los Angeles Region, the San Francisco Bay Area, and the state are much lower at 282.4, 261, and 336 cases per 100,000 people, respectively.

Three Year Average of Chlamydia Crude Case Rate per 100,000 People, 2003-2005



Source: California Department of Public Health, 2007 County Profiles
www.cdph.ca.gov/programs/OHIR/Pages/CHSP.aspx

REPORTED INCIDENCES OF CHLAMYDIA, 2003-2005



Data Source:
California Department of Public Health, Division of Communicable Disease Control
California Department of Finance, 2004 Population Estimates with Age, Sex, and Race/Ethnic Detail, July 2007
Map Source: California County Profiles 2007

CEREBROVASCULAR DISEASE (STROKE)

Majority of Valley counties not meeting healthy standard.

Definition:

This indicator shows the age adjusted death rate per 100,000 people attributed to cerebrovascular disease (stroke) in California between 2003 and 2005.

Why is it important?

Stroke is the leading cause of adult disability and the third leading cause of death in the United States.

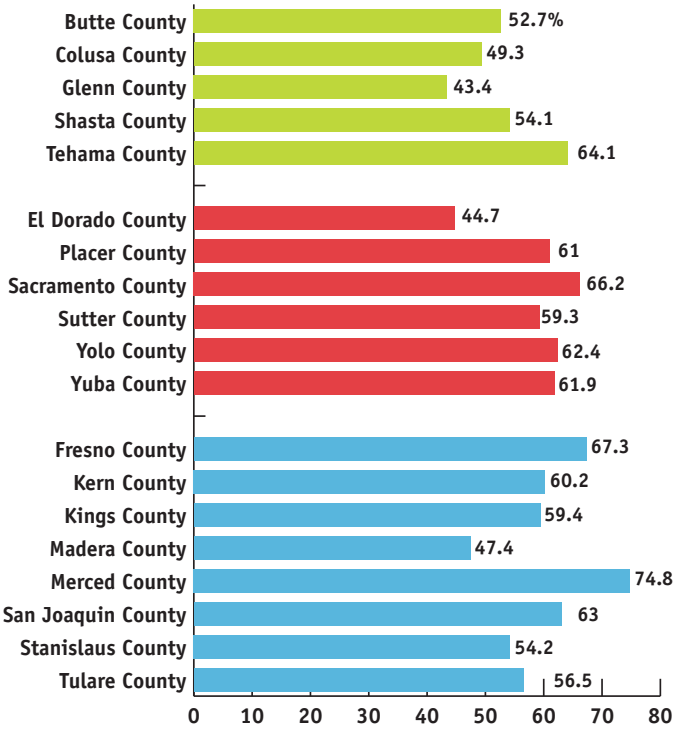
A stroke is an injury to the brain caused by a blockage or rupture of a blood vessel in the brain. The extent and location of the injury determines which brain functions are affected and the likelihood that an individual will survive the stroke. The most important risk factors for stroke are high blood pressure, heart disease, diabetes, and cigarette smoking. Therapies to prevent stroke are based on treating and controlling these risk factors. Thirty percent of all strokes happen to people under the age of 65. Approximately 4 million Americans are living with the effects of stroke. About 1⁄3 have mild impairments, another third are moderately impaired, and the remainder are severely impaired. Studies have shown that, in some cases, stroke morbidity and mortality can be improved if a stroke is diagnosed and treated within the first few hours of the onset of symptoms.

How are we doing?

Fifteen of the Valley's 19 counties did not meet the Healthy People 2010 national standard (50) or state average (51.7) for this indicator. Merced County has the highest death rate (74.8), while El Dorado counties had the lowest (44.7 deaths). Within the Central Valley, the San Joaquin Valley stands out with the highest death rate (60.35 per 100,000 people). With the exception of Madera, the San Joaquin Valley's counties all fall below the state average, the Los Angeles Region (50.7) and the San Francisco Bay Area (52.7).

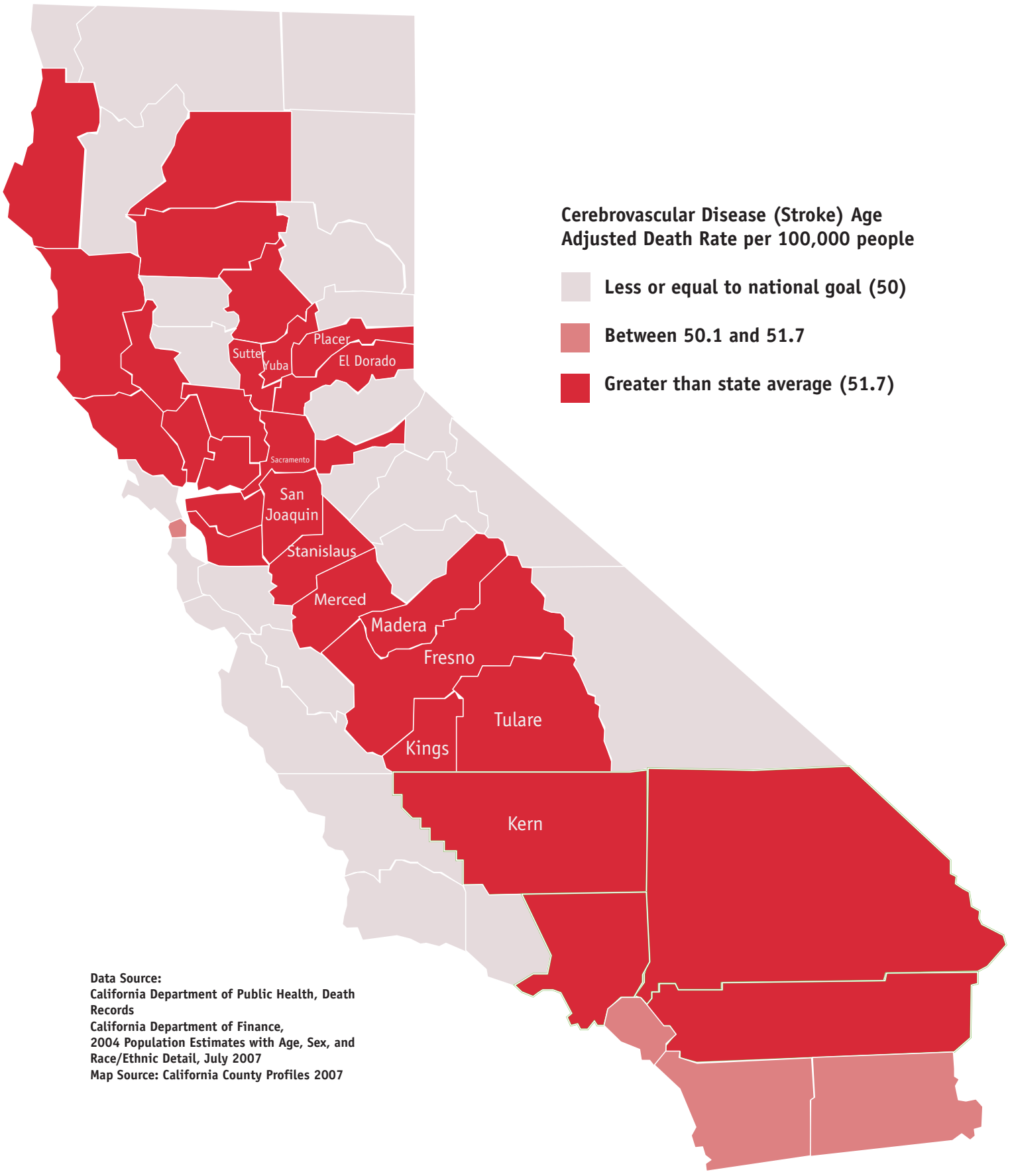
Note: Data for Glenn and Colusa counties is considered unreliable due a relative standard error greater than or equal to 23 percent.

Cerebrovascular Disease Death Rate per 100,000 People, Three Year Average, 2003-2005



Source: California Department of Public Health, 2007 County Profiles
www.cdph.ca.gov/programs/OHIR/Pages/CHSP.aspx

DEATHS DUE TO CEREBROVASCULAR DISEASE (STROKE), 2003-2005



Data Source:
California Department of Public Health, Death Records
California Department of Finance, 2004 Population Estimates with Age, Sex, and Race/Ethnic Detail, July 2007
Map Source: California County Profiles 2007

Social indicators

Unlike other indicators, social indicators rely primarily on behavioral changes to improve the heath of the region. The emotional and related effects of these health related issues can extend beyond those directly involved, with devastating effects on families and communities.

• Excessive alcohol use has declined from 29% in 2003, but the Great Central Valley has a higher percentage of adults who use alcohol and report at least one episode of heavy alcohol consumption in the past month (18.1%) when compared to the Los Angeles Region (17.2%), California as a whole (17.6%), and the San Francisco Bay Area (17.6%).

• Cigarette smoking continues to be highest in the North Sacramento Valley. But all three Valley regions have more smokers when compared to the Los Angeles Region (15%), the San Francisco Bay Area (13.3%), and California (15.2%)

CIGARETTE SMOKING

Reported cigarette use has declined from 1999 but still higher than other regions.

Definition:

This indicator shows the percent of adult survey respondents age 18 and older who reported that they had smoked at the time of the interview.

Why is it important?

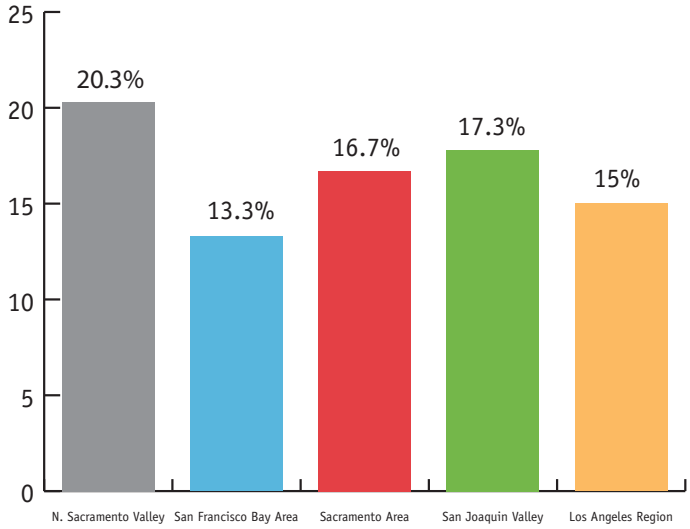
Cigarette smoking is the single most preventable cause of disease and death in the United States.

Smoking is a major risk factor for coronary heart disease, stroke, lung cancer, and chronic lung diseases. Smoking during pregnancy can result in miscarriages, premature delivery, and sudden infant death syndrome. People who are exposed to cigarette smoke are at an increased risk for developing heart disease, lung cancer, asthma, and bronchitis.

How are we doing?:

Both the North Valley (20.3%) and the San Joaquin Valley (16.7%) have declined close to four percentage points since 1999, but they have higher percentages of adult cigarette smokers than the Sacramento Metropolitan Area (19%) which stayed the same. All three regions have more smokers when compared to the Los Angeles Region (15%), California (15.2%), and the San Francisco Bay Area (13.3%).

Percentage of Cigarette Smoker Prevalence Among Respondents Age 18 and Older, 2003



Source: California Health Interview Survey, 2005
www.chis.ucla.edu

HEAVY ALCOHOL USE

Valley use higher than state throughout subregions; North Sacramento Valley rates highest.

Definition:

This indicator shows the percent of adults who reported at least one episode of consuming five or more alcoholic drinks in the past months , among adults who report consuming alcohol.

Why is it important?

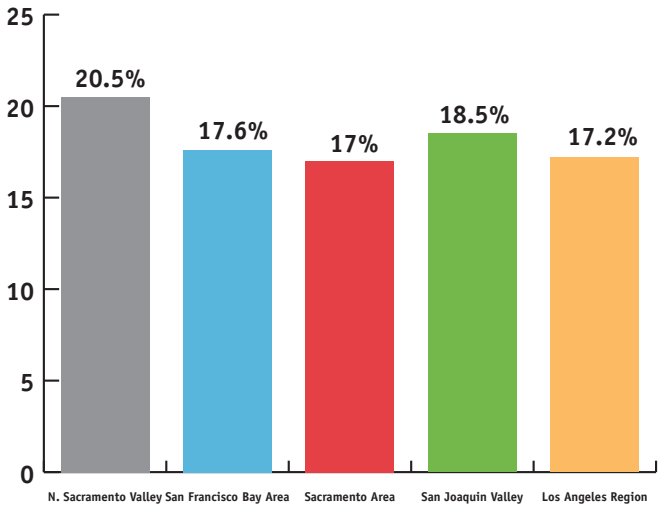
Alcohol use is associated with child and spousal abuse; sexually transmitted diseases, including HIV infection; escalation of health care costs; teen pregnancy; school failure; low worker productivity; and homelessness. Heavy alcohol use and alcohol abuse are strongly associated with motor vehicle accidents, homicides, suicides, and drowning.

Long-term heavy drinking can lead to heart disease, cancer, alcohol-related liver disease, and pancreatitis.

How are we doing?

The Great Central Valley (18.1%) has a higher percentage of adults who use alcohol and report at least one episode of heavy alcohol consumption in the past month when compared to the Los Angeles Region (17.2%), the San Francisco Bay Area (17.6%) and California as a whole (17.6%). Within the Valley, the North Valley (20.5%) experiences the highest percentage of adults who report heavy alcohol consumption when compared to both the San Joaquin Valley (18.5%) and the Sacramento Metropolitan Area (17.2%).

Binge Drinking (five of more drinks in one sitting) by Subregion in Past Month Among Respondents 18 and Older



Source: California Health Interview Survey, 2005
www.chis.ucla.edu

DATA SOURCES

Access to Care

Population Growth

California Dept. of Finance, Demographic Research Unit
State of California, Department of Finance, Population Projections for California and Its Counties 2000-2050, Sacramento, California, July 2007. (Mary Heim, Melanie Martindale and Iris Wang) www.dof.ca.gov/HTML/DEMOGRAP/ReportsPapers/Projections/P1/P1.php

How Many Californians?
Public Policy Institute of California
Hans Johnson
www.ppic.org/content/pubs/cacounts/CC_1099HJCC.pdf

Uninsured People

California Health Interview Survey *2005.*
www.chis.ucla.org

Physicians

RAND California Database
www.ca.rand.org

Denti-Cal Services

California Health Care Foundation
Denti-Cal Facts and Figures, 2007
www.chcf.org

Children Living in Poverty

US Census Bureau
American Fact Finder
www.census.gov

Maternal & Child Health

Infant Mortality

California Department of Public Health
www.cdph.ca.gov/programs/OHIR/Documents/Profiles2007.pdf

Low Birth Weight Infants

California Department of Public Health
www.cdph.ca.gov/programs/OHIR/Documents/Profiles2007.pdf

Prenatal Care

California Department of Public Health
www.cdph.ca.gov/programs/OHIR/Documents/Profiles2007.pdf

Childhood Immunization

California Department of Public Health
www.dhs.ca.gov/ps/dcdc/izgroup/pdf/KRS07Final.pdf

Note: Los Angeles includes Los Angeles County

Other So. California includes Imperial, Orange, Riverside, San Bernardino, and San Diego Counties

SF Bay Area includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma Counties

Central Coast includes Monterey, San Luis Obispo, Santa Barbara, Santa Cruz, and Ventura Counties

Central Valley includes Fresno, Kern, Kings, Madera, Merced, and Tulare Counties

North Central Valley includes Sacramento, San Joaquin, and Stanislaus Counties

Rural No. California includes Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, El Dorado, Glenn, Humboldt, Inyo, Lake, Lassen, Mariposa, Mendocino, Modoc, Mono, Nevada,Placer, Plumas, San Benito, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Tuolumne, Yolo, and Yuba Counties

Senior Health

Influenza Immunization
California Health Interview Survey *2005*
www.chis.ucla.og.org

Fatal and Non Fatal Falls
California Data Online, EPIC
www.applications.dhs.ca.gov/epicdata/content/sum_causebyage.htm

People Living with Disabilities
US Census Bureau
American Fact Finder
www.census.gov
www.factfinder.census.gov/servlet/STTable?_bm=y&-geo_id=01000US&-qr_name=ACS_2006_EST_G00_S0103&-ds_name=ACS_2006_EST_G00_

Chronic & Communicable Diseases

Coronary Heart Disease
California Department of Public Health
County Health Profiles 2007
www.cdph.ca.gov/programs/OHIR/Documents/Profiles2007.pdf

Cerebrovascular Disease
California Department of Public Health
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www.cdph.ca.gov/programs/OHIR/Documents/Profiles2007.pdf

Diabetes
California Department of Public Health
County Health Profiles 2007
www.cdph.ca.gov/programs/OHIR/Documents/Profiles2007.pdf

Asthma
California Health Interview Survey *2005.*
www.chis.ucla.og.org

Cancer
California Department of Public Health
County Health Profiles 2007
http://ww2.cdph.ca.gov/programs/OHIR/Documents/Profiles2007.pdf

AIDS
RAND California Database
www.ca.rand.org

Chlamydia
California Department of Public Health
County Health Profiles 2007
www.cdph.ca.gov/programs/OHIR/Documents/Profiles2007.pdf

Tuberculosis
California Department of Public Health
Report on Tuberculosis in California, 2006
www.cdph.ca.gov/data/statistics/Pages/TuberculosisDiseaseData.aspx

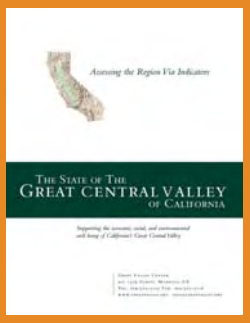
Social Indicators

Cigarette Smoking
California Health Interview Survey *2005.*
www.chis.ucla.org

Heavy Alcohol Use
California Health Interview Survey *2005.*
www.chis.ucla.org

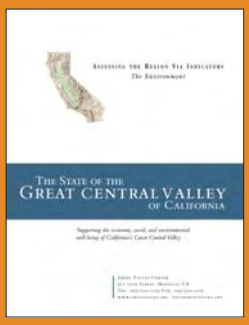
The State of the Great Central Valley Indicators report Series

each topic area in the great valley center's indicators report series is updated every five years. The following reports are available for download free of charge at www.Greatvalley.Org/indicators.



THE ECONOMY

1999 EDITION AVAILABLE
2004 EDITION AVAILABLE
UPDATE SCHEDULED FOR 2009



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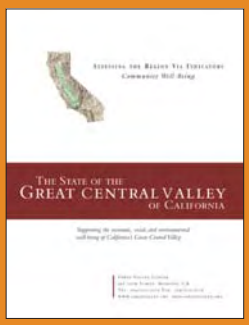

COMMUNITY WELL-BEING

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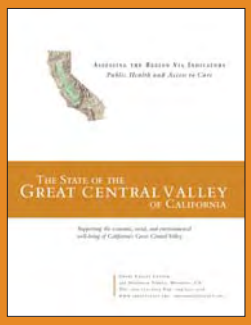

PUBLIC HEALTH AND ACCESS TO CARE

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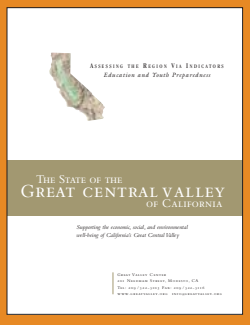
2007 EDITION AVAILABLE



EDUCATION AND YOUTH PREPAREDNESS

2003 EDITION AVAILABLE
UPDATE SCHEDULED FOR 2008

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The Great Valley Center is a nonprofit organization working in partnership with the University of California, Merced to improve the economic, social and environmental well-being of California's Great Central Valley.