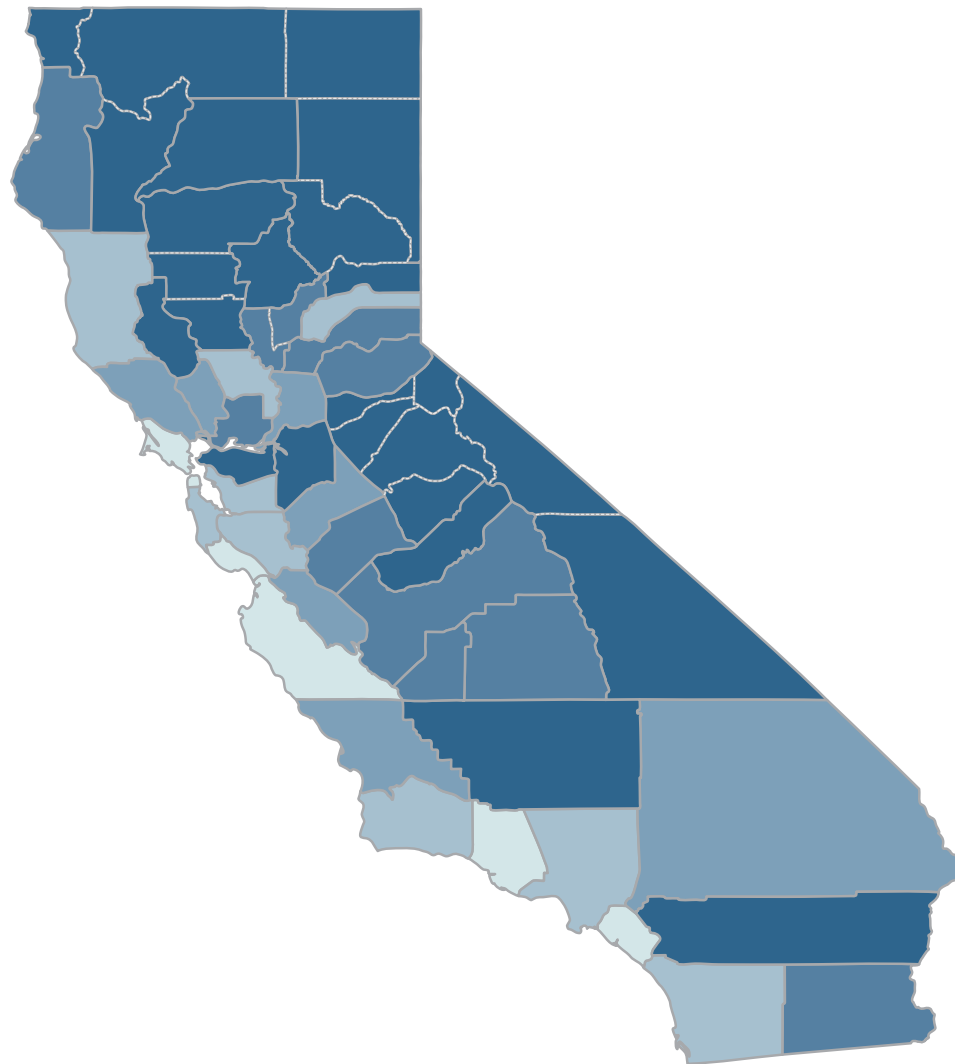




CALIFORNIA  
HEALTHCARE  
FOUNDATION



## **Chronic Conditions of Californians** 2007 California Health Interview Survey

March 2010

# Chronic Conditions of Californians

## 2007 California Health Interview Survey

*Prepared for*

CALIFORNIA HEALTHCARE FOUNDATION

*by*

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## About the Foundation

The **California HealthCare Foundation** is an independent philanthropy committed to improving the way health care is delivered and financed in California. By promoting innovations in care and broader access to information, our goal is to ensure that all Californians can get the care they need, when they need it, at a price they can afford. For more information, visit [www.chcf.org](http://www.chcf.org).

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# Executive Summary

## Overview

Chronic health conditions are the leading cause of death and disability in the United States, and the largest component of health care costs. Chronic health conditions are defined as “non-communicable illnesses that are prolonged in duration, do not resolve spontaneously, and are rarely cured completely.”<sup>1</sup> Nearly one in two American adults live with at least one chronic health condition such as heart disease, cancer, stroke, or diabetes.<sup>2</sup> The impact of chronic health conditions also extends to children. The percentage of children and adolescents with a chronic illness in the United States has jumped from 1.8 percent in the 1960s to more than 7 percent in 2004.<sup>3</sup> Health care for people with chronic health conditions make up more than 70 percent of the nation’s total annual health care costs.<sup>4</sup>

Some chronic health conditions are deemed ambulatory care sensitive conditions (ACSCs) because the nature of the illness is controllable with effective and timely outpatient care and disease management.<sup>5</sup> Mental health issues, such as depression and psychological distress, also result in higher use of medical care and are considered an ACSC.<sup>6</sup> The failure to effectively manage these chronic conditions due to poor quality, uncoordinated care and/or insufficient access to care can result in heavier use of emergency room (ER) services and hospital services, poorer overall health, and greater mortality. By understanding the burden of these chronic health conditions, health care programs can target their efforts to improve chronic disease management and treatment.

With funding from the California Health Care Foundation (CHCF), the UCLA Center for Health Policy Research (CHPR) is pleased to present the third edition of the *Chronic Conditions of Californians* report. As one of the most populated and diverse states in the United States, California is a unique place in which to examine the impact of chronic health conditions.

The first edition used 2003 data from the California Health Interview Survey (CHIS) while the second edition used CHIS 2005 data to provide a report on the current state of chronic health conditions among California adults and children. The third edition of *Chronic Conditions of Californians* expands on the earlier versions by using CHIS 2007 data. This report follows the same format and health measures as the second edition using CHIS 2005 data, which makes the data comparable between second and third editions. However, the third edition does not include hospital data. Data from this edition are available at CHCF’s Web site through an interactive on-line interface that improves access to data and maps concurrently ([data.chcf.org](http://data.chcf.org)).

This report is divided into four chapters. Chapter I presents composite measures of chronic conditions among adults and children in data tables and maps. These composite measures can be used to determine specific areas with the heaviest burden of chronic conditions. The data tables and maps also highlight composite measures of frequent health care use and barriers to health care use among adults and children with chronic conditions. Chapter II provides demographic data and data for each chronic condition including active asthma, congestive heart failure (CHF), diabetes, hypertension, and psychological distress among California adults. Chapter III highlights California children and adolescents by including data on demographics and data on active asthma and health status. A brief conclusion is offered in Chapter IV. For more information about the data sources, description of demographic and health indicators, and methodology, please refer to the Appendix.

The overall goal of this report is to provide evidence for public health workers, health care providers, policymakers, and all others interested in addressing the burden of chronic conditions of Californians. By making data available and user-friendly for health care providers and policymakers, such

research can help to ensure the availability of accessible and quality health care to those most affected by the burden of chronic conditions, and aid the development of targeted policy efforts to reduce morbidity and mortality associated with chronic health conditions and improve the overall health and well-being of Californians.

## Methodology

To examine the current state of chronic health conditions among Californians, 2007 data from the California Health Interview Survey (CHIS) were used.<sup>7</sup> In CHIS 2007, there were over 51,000 completed interviews with adults and over 13,000 with adolescents and children. The methods and health measures remain the same as the 2005 data with the exception that there are no corresponding hospital data.

The 2007 CHIS data were used to estimate the total number or prevalence of adults and children with a chronic condition. These data were presented by California counties/county clusters, Los Angeles Service Planning Areas (SPAs), and San Diego Health regions. Following the U.S. Agency for Healthcare Research and Quality (AHRQ)'s published guidelines, specific chronic ACSCs were identified that result in potentially preventable hospitalizations.<sup>8</sup> Specifically, the number of adults with active asthma, CHF, diabetes, hypertension, and psychological distress were examined, as were the number of children

and adolescents with active asthma and fair-to-poor health status.

This report follows the same method as the first and second editions of *Chronic Conditions of Californians* by constructing three composite measures of chronic conditions using CHIS data. These measures were based on the total percentage of those who reported having at least one of the following chronic health conditions: active asthma, CHF, diabetes, hypertension, psychological distress, or fair-to-poor health status. This measure was used to further construct additional composite measures to compare health care utilization and barriers to health care among adults or children with at least one chronic health condition. Counties were ranked by this composite measure into 5 groups (or quintiles). Group 1 reflects areas with the lowest percent of adults or children with chronic conditions (best health group). Group 5 reflects areas with the highest percent of adults or children with chronic conditions (worst health group). These composite measures and rankings can be compared with the second *Chronic Conditions* report since it uses the same health measures, but these data cannot be compared with the first edition. Within each county, select demographic characteristics were described (e.g., age, low-income, race/ethnicity) as were health care coverage and utilization (e.g., uninsured, covered by Medi-Cal, ER visits, and doctor visits) among adults and children with chronic conditions. Data

were reported either at the county-level or sub-county level. However, for counties with small populations, neighboring counties were combined to create county clusters to ensure stable estimates. For race/ethnicity, data were reported at the regional level.

For a more detailed description of data sources, definitions of chronic health conditions, indicators, geographic areas, and data analysis, please refer to the Appendix.

## Summary of Findings

### Chronic Condition Indices

- In 2007, one-third of California adults (36.0 percent) reported having at least one chronic health condition (including active asthma, CHF, diabetes, hypertension, or psychological distress). The proportion varied from 28.0 percent in Marin County to 49.2 percent in the Tehama/Glenn/Colusa County cluster (Table 1).
- Among California children, 16.0 percent reported having at least one chronic health condition in 2007 (including active asthma or fair-to-poor health status). The proportion varied from 8.3 percent in the San Diego North Inland region to 22.7 percent in the Imperial County who reported having at least one chronic condition (Table 1).

- After ranking counties according to their prevalence of chronic conditions, San Luis Obispo and Marin counties both ranked in the best two health groups for all seven chronic conditions. In contrast, Lake County fared worst, ranking in the bottom health group for all seven chronic conditions (Table 2).

### Adult Active Asthma

The statewide prevalence of active asthma was 8.1 percent among adults, yet the range varied from 4.9 percent in the San Diego North Coastal region to 19.1 percent in the Tehama/Glenn/Colusa County cluster (Table 4.1).

### Adult Congestive Heart Failure

The statewide prevalence of CHF was 1.8 percent among adults. The variation between county areas was 0.5 percent in Marin County to 4.3 percent in the Tuolumne/Calaveras/Amador/Inyo/Mariposa/Mono/Alpine County cluster (Table 5.1).

### Adult Diabetes

The statewide prevalence of diabetes was approximately 7.8 percent among adults. The variation between county areas was 3.8 percent in San Diego North Central region to 11.3 percent in Tulare County (Table 6.1).

### Adult Hypertension

The statewide prevalence of hypertension was approximately 26.1 percent among adults, which is the highest of all chronic conditions. The prevalence varied from 19.9 percent in Marin County to 37.3 percent in Lake County (Table 7.1).

### Adult Psychological Distress

The statewide prevalence of psychological distress was approximately 3.8 percent among adults. The range varied from Sonoma County at 1.0 percent to the Tehama/Glenn/Colusa County cluster at 8.7 percent (Table 8.1).

### Child Active Asthma (ages 1 to 17)

The statewide prevalence of active asthma was 10.4 percent among children. The range varied from 4.7 percent in the San Diego North Inland region to 15.9 percent in the Del Norte/Siskiyou/Lassen/Trinity/Modoc/Plumas/Sierra County cluster (Table 10.1).

### Child Health Status (ages 0 to 17)

The statewide prevalence of fair-to-poor health status was 6.8 percent among children. The range varied from 1.8 percent in Marin County to 15.1 percent in Monterey County (Table 11.1).

# I. Chronic Condition Indices and Health Care Access Indicators

THIS CHAPTER PROVIDES AN OVERVIEW OF THE PREVALENCE OF chronic conditions among adults and children in California. By ranking the prevalence by counties (or by county cluster or sub-groups) in Tables 1 and 2, areas with a high or low proportion of people with chronic conditions

can be identified. Group 1 reflects areas with the lowest percentage of adults with chronic conditions (best health group). Group 5 reflects areas with the highest percentage of adults with chronic conditions (worst health group).

**Table 1. Composite of Chronic Condition Indices and Access Indicators, Adults and Children, 2007**

	ADULTS (AGE 18 AND OLDER)								CHILDREN (AGES 1-17)							
	TOTAL ADULTS	WITH ONE OR MORE CHRONIC CONDITION			WITH FREQUENT HEALTH CARE USE <sup>1</sup>		WITH BARRIERS TO HEALTH CARE USE <sup>1</sup>		TOTAL CHILDREN	WITH ONE OR MORE CHRONIC CONDITION			WITH FREQUENT HEALTH CARE USE <sup>1</sup>		WITH BARRIERS TO HEALTH CARE USE <sup>1</sup>	
		NUMBER	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*		NUMBER	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*
<b>California</b>	<b>26,874,000</b>	<b>9,677,000</b>	<b>36.0%</b>	<b>-</b>	<b>57.7%</b>	<b>-</b>	<b>25.0%</b>	<b>-</b>	<b>9,392,000</b>	<b>1,500,000</b>	<b>16.0%</b>	<b>-</b>	<b>60.7%</b>	<b>-</b>	<b>22.7%</b>	<b>-</b>
Alameda	1,134,000	428,000	37.8%	3	54.1%	1	21.7%	2	342,000	63,000	18.5%	4	58.0%	2	13.3% <sup>§</sup>	1
Butte	164,000	63,000	38.6%	4	62.3%	4	18.9%	1	45,000	3,000	7.2% <sup>§</sup>	1	69.3%	4	16.6% <sup>§</sup>	2
Contra Costa	775,000	286,000	36.9%	3	51.6%	1	16.4%	1	242,000	46,000	19.0%	4	49.9%	1	39.3%	5
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	113,000	45,000	40.2%	5	63.4%	5	22.6%	2	30,000	5,000	15.9% <sup>§</sup>	3	66.4% <sup>§</sup>	4	-	-
El Dorado	137,000	57,000	41.7%	5	57.3%	3	25.8%	4	38,000	4,000	10.2%	1	54.1%	2	13.2% <sup>§</sup>	1
Fresno	628,000	243,000	38.6%	4	59.5%	4	24.2%	3	250,000	55,000	21.8%	5	68.7%	4	30.6% <sup>§</sup>	5
Humboldt	100,000	32,000	32.3%	1	66.1%	5	16.9%	1	26,000	3,000	12.9%	2	64.1%	3	-	-
Imperial	119,000	48,000	40.3%	5	63.7%	5	25.9%	4	44,000	10,000	22.7%	5	78.2%	5	15.0% <sup>§</sup>	2
Kern	533,000	194,000	36.4%	3	59.0%	3	32.5%	5	230,000	43,000	18.9%	4	77.2%	5	14.9% <sup>§</sup>	2
Kings	92,000	31,000	33.8%	2	67.3%	5	33.2%	5	41,000	9,000	21.4%	5	70.1%	4	25.5% <sup>§</sup>	4
Lake	50,000	24,000	46.9%	5	65.0%	5	29.0%	5	12,000	2,000	18.4%	4	76.5%	5	-	-
Los Angeles	7,328,000	2,551,000	34.8%	2	59.4%	3	27.8%	4	2,664,000	465,000	17.5%	4	58.0%	2	24.6%	3
SPA 1 –Antelope Valley	230,000	89,000	38.6%	4	67.3%	5	23.0%	3	90,000	14,000	15.5%	3	76.4%	5	15.4% <sup>§</sup>	2
SPA 2 –San Fernando	1,522,000	537,000	35.3%	2	58.9%	3	25.1%	4	550,000	77,000	14.0%	2	67.4%	4	21.8%	3



	ADULTS (AGE 18 AND OLDER)								CHILDREN (AGES 1-17)							
	TOTAL ADULTS	WITH ONE OR MORE CHRONIC CONDITION							TOTAL CHILDREN	WITH ONE OR MORE CHRONIC CONDITION						
		NUMBER	PERCENT	GROUP*	WITH FREQUENT HEALTH CARE USE <sup>†</sup>	PERCENT	GROUP*	WITH BARRIERS TO HEALTH CARE USE <sup>†</sup>		PERCENT	GROUP*	WITH FREQUENT HEALTH CARE USE <sup>†</sup>	PERCENT	GROUP*	WITH BARRIERS TO HEALTH CARE USE <sup>†</sup>	PERCENT
SPA 3–San Gabriel Valley	1,386,000	466,000	33.6%	2	56.4%	2	28.8%	5	433,000	87,000	20.1%	5	53.1%	2	30.0%	4
SPA 4–Metro	880,000	269,000	30.6%	1	62.5%	4	42.4%	5	317,000	53,000	16.8%	3	59.0%	3	19.7% <sup>§</sup>	3
SPA 5–West Area	520,000	178,000	34.3%	2	53.4%	1	19.2%	2	125,000	20,000	16.0%	3	30.1% <sup>§</sup>	1	12.6% <sup>§</sup>	1
SPA 6–South	668,000	257,000	38.5%	4	62.8%	4	41.4%	5	329,000	66,000	20.1%	5	52.5%	2	28.5% <sup>§</sup>	4
SPA 7–East Area	948,000	343,000	36.2%	3	56.3%	2	20.3%	2	408,000	70,000	17.2%	4	66.3%	3	23.1% <sup>§</sup>	3
SPA 8–South Bay	1,176,000	412,000	35.1%	2	62.6%	4	23.5%	3	412,000	78,000	18.8%	4	54.5%	2	27.4% <sup>§</sup>	4
Madera	98,000	38,000	38.5%	4	59.1%	3	27.4%	4	38,000	6,000	14.4%	2	64.9%	3	32.3% <sup>§</sup>	5
Marin	189,000	53,000	28.0%	1	51.3%	1	10.5%	1	51,000	4,000	7.7% <sup>§</sup>	1	81.7%	5	–	–
Mendocino	68,000	32,000	47.0%	5	50.7%	1	24.8%	3	20,000	3,000	17.0%	3	43.0% <sup>§</sup>	1	23.9% <sup>§</sup>	3
Merced	171,000	64,000	37.3%	3	63.4%	5	37.7%	5	76,000	15,000	19.2%	5	68.7%	4	17.5% <sup>§</sup>	2
Monterey	291,000	95,000	32.6%	1	56.3%	2	28.5%	4	117,000	26,000	22.5%	5	76.6%	5	25.6% <sup>§</sup>	4
Napa	96,000	38,000	39.1%	4	60.9%	4	17.1%	1	32,000	7,000	20.5%	5	39.3% <sup>§</sup>	1	21.6% <sup>§</sup>	3
Nevada	80,000	28,000	35.4%	2	57.9%	3	16.5%	1	18,000	3,000	13.9% <sup>§</sup>	2	73.7%	5	–	–
Orange	2,256,000	719,000	31.9%	1	60.1%	4	26.4%	4	757,000	116,000	15.3%	3	70.0%	4	17.6% <sup>§</sup>	2
Placer	238,000	71,000	29.9%	1	49.9%	1	16.4%	1	81,000	14,000	17.4%	4	55.7%	2	30.3% <sup>§</sup>	5
Riverside	1,403,000	507,000	36.1%	3	57.9%	3	23.8%	3	547,000	59,000	10.7%	1	60.6%	3	30.6% <sup>§</sup>	5
Sacramento	1,003,000	423,000	42.1%	5	56.0%	2	21.2%	2	350,000	41,000	11.8%	1	58.7%	3	18.0% <sup>§</sup>	3
San Benito	41,000	14,000	33.7%	2	56.7%	2	27.3% <sup>§</sup>	4	16,000	2,000	14.1%	2	63.5%	3	38.3% <sup>§</sup>	5
San Bernardino	1,382,000	538,000	39.0%	4	55.6%	2	29.0%	5	571,000	87,000	15.2%	3	69.1%	4	30.1%	4
San Diego	2,198,000	785,000	35.7%	3	55.6%	2	23.9%	3	759,000	97,000	12.8%	2	62.3%	3	14.7%	1
1–North Coastal	367,000	116,000	31.6%	1	56.9%	3	24.8%	3	123,000	19,000	15.1%	3	54.0%	2	27.9% <sup>§</sup>	4
2–North Central	442,000	149,000	33.7%	2	51.7%	1	18.1%	1	117,000	11,000	9.8%	1	80.7%	5	–	–
3–Central	370,000	148,000	39.9%	4	59.9%	4	37.2%	5	125,000	19,000	15.0%	2	49.3%	1	23.6% <sup>§</sup>	3
4–South	286,000	108,000	37.8%	3	54.4%	2	22.0%	2	114,000	14,000	11.9%	1	59.8%	3	–	–
5–East	356,000	137,000	38.5%	4	58.5%	3	18.5%	1	120,000	22,000	18.0%	4	73.1%	4	14.2% <sup>§</sup>	1
6–North Inland	378,000	128,000	33.7%	2	51.8%	1	21.6%	2	159,000	13,000	8.3%	1	61.2%	3	10.4% <sup>§</sup>	1

	ADULTS (AGE 18 AND OLDER)								CHILDREN (AGES 1–17)							
	TOTAL ADULTS	WITH ONE OR MORE CHRONIC CONDITION						TOTAL CHILDREN	WITH ONE OR MORE CHRONIC CONDITION							
		NUMBER	PERCENT	GROUP*	WITH FREQUENT HEALTH CARE USE†	WITH BARRIERS TO HEALTH CARE USE†	PERCENT		GROUP*	NUMBER	PERCENT	GROUP*	WITH FREQUENT HEALTH CARE USE†	WITH BARRIERS TO HEALTH CARE USE†	PERCENT	GROUP*
San Francisco	674,000	219,000	32.6%	1	59.1%	3	23.6%	3	108,000	14,000	13.0%	2	21.4% <sup>§</sup>	1	–	–
San Joaquin	443,000	169,000	38.3%	4	52.6%	1	29.1%	5	204,000	34,000	16.9%	3	51.0%	1	17.5% <sup>§</sup>	2
San Luis Obispo	192,000	63,000	32.9%	1	55.0%	2	20.9%	2	51,000	5,000	10.2% <sup>§</sup>	1	50.3% <sup>§</sup>	1	–	–
San Mateo	558,000	211,000	37.8%	3	50.5%	1	20.3%	2	153,000	26,000	17.2%	4	35.2% <sup>§</sup>	1	11.3% <sup>§</sup>	1
Santa Barbara	300,000	100,000	33.4%	1	50.8%	1	33.7%	5	102,000	19,000	19.1%	5	33.8% <sup>§</sup>	1	19.7% <sup>§</sup>	3
Santa Clara	1,321,000	435,000	32.9%	1	57.4%	3	20.8%	2	432,000	68,000	15.7%	3	67.5%	4	35.1%	5
Santa Cruz	197,000	73,000	36.9%	3	59.5%	4	17.2%	1	56,000	8,000	13.5%	2	75.9%	5	15.3% <sup>§</sup>	2
Shasta	136,000	57,000	42.3%	5	64.1%	5	22.1%	2	40,000	4,000	10.1% <sup>§</sup>	1	85.2%	5	38.1% <sup>§</sup>	5
Solano	298,000	129,000	43.2%	5	64.8%	5	24.4%	3	104,000	11,000	10.4%	1	52.7%	2	17.9% <sup>§</sup>	2
Sonoma	355,000	113,000	31.7%	1	56.7%	2	12.6%	1	110,000	21,000	19.3%	5	35.8% <sup>§</sup>	1	40.1% <sup>§</sup>	5
Stanislaus	348,000	155,000	44.5%	5	54.5%	2	27.7%	4	154,000	27,000	17.5%	4	64.2%	3	14.1% <sup>§</sup>	1
Sutter, Yuba	112,000	49,000	44.1%	5	68.2%	5	28.5%	4	47,000	8,000	16.6%	3	73.5%	4	–	–
Tehama, Glenn, Colusa	82,000	40,000	49.2%	5	63.4%	4	23.8%	3	27,000	6,000	21.2%	5	79.1%	5	12.7% <sup>§</sup>	1
Tulare	288,000	106,000	36.7%	3	63.5%	5	30.9%	5	125,000	27,000	21.7%	5	52.1%	2	11.2% <sup>§</sup>	1
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	148,000	65,000	43.9%	5	63.6%	5	18.1%	1	33,000	4,000	13.6% <sup>§</sup>	2	25.7% <sup>§</sup>	1	35.3% <sup>§</sup>	5
Ventura	596,000	239,000	40.0%	4	59.5%	4	23.0%	3	206,000	24,000	11.6%	1	76.3%	5	26.7% <sup>§</sup>	4
Yolo	139,000	47,000	34.1%	2	49.1%	1	25.1%	4	44,000	6,000	12.6%	2	57.9%	2	24.7% <sup>§</sup>	4

\*The rates from counties and SPAs were ranked from lowest to highest and then divided into five groups or quintiles. Group 1 reflects counties or SPAs with the least amount of chronic conditions (best rates). Group 5 reflects counties or SPAs with the highest amount of a chronic conditions (worst rates).

†Includes adults who had four or more doctor visits in the past 12 months or went to the ER in the past 12 months, and children who had three or more doctor visits in the past 12 months or went to the ER in the past 12 months.

‡Includes adults/children who were not insured at any time in past 12 months, did not have a usual source of care, or had difficulty communicating with their doctor.

§Indicates an unstable estimate.

Dash (–) indicates the sample size is too small to provide an estimate.

Notes: Adult Chronic Condition Index is computed from adults who reported one or more of the following conditions: active asthma, congestive heart failure, diabetes, hypertension, or psychological distress. Child Chronic Condition Index is computed from children (ages 1 to 17) who reported one of the following conditions: active asthma or health status of fair or poor.

Source: 2007 California Health Interview Survey.

**Table 2. Chronic Condition Indices and Access Indicators, Adults and Children, 2007**

	ADULTS (AGE 18 AND OLDER)										CHILDREN (AGE 1-17)				ALL AGES	
	WITH ACTIVE ASTHMA		WITH CONGESTIVE HEART FAILURE		WITH DIABETES		WITH HYPERTENSION		WITH PSYCH DISTRESS		WITH ACTIVE ASTHMA		WITH FAIR-POOR HEALTH STATUS		TOTAL NUMBER OF INDICATORS IN...	
	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	BEST TWO GROUPS	WORST TWO GROUPS
<b>California</b>	<b>8.1%</b>	<b>-</b>	<b>1.8%</b>	<b>-</b>	<b>7.8%</b>	<b>-</b>	<b>26.1%</b>	<b>-</b>	<b>3.8%</b>	<b>-</b>	<b>10.4%</b>	<b>-</b>	<b>6.8%</b>	<b>-</b>	<b>-</b>	<b>-</b>
Alameda	8.9%	3	1.8%	3	7.8%	3	28.6%	4	2.3%	1	14.4%	5	6.8% <sup>†</sup>	3	1	2
Butte	11.3%	5	2.0% <sup>†</sup>	4	6.7%	2	28.3%	4	3.0% <sup>†</sup>	2	6.8% <sup>†</sup>	1	-	-	3	3
Contra Costa	8.9%	3	2.0%	3	6.5%	2	25.0%	2	2.6% <sup>†</sup>	1	15.2%	5	5.0% <sup>†</sup>	2	4	1
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	8.4%	3	2.0% <sup>†</sup>	3	7.9%	3	31.2%	5	5.6%	5	15.9% <sup>†</sup>	5	-	-	0	3
El Dorado	8.9%	3	1.4% <sup>†</sup>	2	6.9%	2	30.8%	5	3.5%	3	8.2%	1	2.3% <sup>†</sup>	1	4	1
Fresno	11.5%	5	1.4% <sup>†</sup>	2	10.5%	5	28.4%	4	4.3% <sup>†</sup>	4	13.1%	4	9.1% <sup>†</sup>	4	1	6
Humboldt	7.2%	2	1.7%	3	6.7%	2	23.0%	1	5.5% <sup>†</sup>	5	7.5%	1	6.6% <sup>†</sup>	3	4	1
Imperial	10.1%	4	2.2%	4	11.0%	5	28.9%	4	3.4% <sup>†</sup>	3	10.2%	3	12.3%	5	0	5
Kern	11.4%	5	2.2% <sup>†</sup>	4	9.3%	4	27.3%	3	3.8%	3	14.8%	5	6.0% <sup>†</sup>	3	0	4
Kings	8.2%	3	2.0%	4	10.4%	5	23.5%	1	5.3%	5	15.7%	5	10.0%	5	1	5
Lake	9.6%	4	2.5%	4	9.7%	5	37.3%	5	6.2%	5	11.9%	4	9.1% <sup>†</sup>	4	0	7
Los Angeles	6.8%	1	1.6%	2	8.8%	4	25.5%	2	3.8%	3	10.9%	3	8.4%	4	3	2
SPA 1–Antelope Valley	10.0%	4	2.2% <sup>†</sup>	4	8.0%	3	28.4%	4	4.8%	4	11.8%	4	4.2% <sup>†</sup>	2	1	5
SPA 2–San Fernando	6.9%	1	1.3%	1	9.3%	5	25.0%	2	2.9%	2	8.6%	2	5.6%	3	5	1
SPA 3–San Gabriel Valley	5.4%	1	1.1%	1	8.5%	4	25.6%	3	3.5%	3	13.3%	4	9.6%	5	2	3
SPA 4–Metro	5.3%	1	1.8%	3	8.5%	4	22.1%	1	4.6%	4	9.4%	3	7.6%	3	2	2
SPA 5–West Area	8.0%	2	1.4% <sup>†</sup>	2	6.2%	1	25.5%	2	1.1% <sup>†</sup>	1	13.9% <sup>†</sup>	5	4.2% <sup>†</sup>	2	6	1
SPA 6–South	8.3%	3	2.9%	5	9.9%	5	29.0%	4	7.0%	5	12.3%	4	14.1%	5	0	6
SPA 7–East Area	6.2%	1	1.3%	2	10.2%	5	26.1%	3	5.0%	4	8.6%	2	9.4%	5	3	3
SPA 8–South Bay	8.1%	2	1.6%	2	8.0%	3	25.3%	2	2.9%	2	12.4%	4	7.7%	4	4	2
Madera	10.8%	5	2.7% <sup>†</sup>	5	8.1%	3	28.3%	4	5.2%	4	9.6%	3	4.4% <sup>†</sup>	2	1	4
Marin	7.2%	2	0.5% <sup>†</sup>	1	4.0% <sup>†</sup>	1	19.9%	1	2.5% <sup>†</sup>	1	5.8% <sup>†</sup>	1	1.8% <sup>†</sup>	1	7	0
Mendocino	8.2%	2	3.2%	5	7.5%	3	37.1%	5	3.4%	3	8.1% <sup>†</sup>	1	9.9% <sup>†</sup>	5	2	3

	ADULTS (AGE 18 AND OLDER)										CHILDREN (AGE 1-17)				ALL AGES	
	WITH ACTIVE ASTHMA		WITH CONGESTIVE HEART FAILURE		WITH DIABETES		WITH HYPERTENSION		WITH PSYCH DISTRESS		WITH ACTIVE ASTHMA		WITH FAIR-POOR HEALTH STATUS		TOTAL NUMBER OF INDICATORS IN...	
	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	BEST TWO GROUPS	WORST TWO GROUPS
Merced	14.7%	5	2.0%	3	7.5%	3	22.7%	1	3.8%	3	14.2%	5	7.8% <sup>†</sup>	4	1	3
Monterey	6.7%	1	2.7% <sup>†</sup>	5	8.4%	4	26.1%	3	3.3%	2	7.9% <sup>†</sup>	1	15.1% <sup>†</sup>	5	3	3
Napa	9.3%	4	2.4% <sup>†</sup>	4	9.2%	4	29.0%	4	2.3%	1	14.4%	5	9.1% <sup>†</sup>	4	1	6
Nevada	9.0%	4	3.0% <sup>†</sup>	5	4.9%	1	26.8%	3	3.1%	2	13.9% <sup>†</sup>	5	4.5% <sup>†</sup>	2	3	3
Orange	6.5%	1	1.6%	2	6.7%	2	21.7%	1	3.9%	3	9.2%	2	7.1%	3	5	0
Placer	6.8%	1	2.5% <sup>†</sup>	5	5.5%	1	23.5%	1	1.7% <sup>†</sup>	1	15.5%	5	2.8% <sup>†</sup>	1	5	2
Riverside	6.3%	1	1.8%	3	7.8%	3	27.1%	3	4.6%	4	4.9%	1	6.5%	3	2	1
Sacramento	13.3%	5	2.4%	4	6.6%	2	30.7%	5	5.6%	5	8.8%	2	2.9% <sup>†</sup>	1	3	4
San Benito	11.3% <sup>†</sup>	5	–	–	7.6%	3	22.1%	1	2.3% <sup>†</sup>	1	4.9% <sup>†</sup>	1	9.6% <sup>†</sup>	5	3	2
San Bernardino	9.0%	4	2.3%	4	9.2%	4	27.9%	3	4.0%	4	10.8%	3	4.9%	2	1	4
San Diego	8.0%	2	2.0%	3	6.3%	1	26.0%	3	3.3%	2	8.8%	2	4.6%	2	5	0
1–North Coastal	4.9%	1	1.0% <sup>†</sup>	1	5.9%	1	23.6%	2	3.6% <sup>†</sup>	3	9.3%	2	6.1% <sup>†</sup>	3	5	0
2–North Central	8.9%	3	1.0% <sup>†</sup>	1	3.8%	1	24.6%	2	1.8% <sup>†</sup>	1	7.4%	1	3.4% <sup>†</sup>	1	6	0
3–Central	7.9%	2	2.3% <sup>†</sup>	4	8.8%	4	28.0%	4	4.4%	4	11.3% <sup>†</sup>	4	5.1% <sup>†</sup>	3	1	5
4–South	9.2%	4	1.8% <sup>†</sup>	3	8.3%	4	28.2%	4	3.5% <sup>†</sup>	3	9.6%	3	2.1% <sup>†</sup>	1	1	3
5–East	9.4%	4	4.2% <sup>†</sup>	5	5.8%	1	29.5%	5	4.7% <sup>†</sup>	4	11.5%	4	7.0% <sup>†</sup>	3	1	5
6–North Inland	7.8%	2	1.8% <sup>†</sup>	3	6.1%	1	23.0%	1	2.4%	1	4.7%	1	4.2% <sup>†</sup>	2	6	0
San Francisco	6.3%	1	1.2% <sup>†</sup>	1	6.8%	2	22.8%	1	3.0% <sup>†</sup>	2	10.5% <sup>†</sup>	3	4.1% <sup>†</sup>	1	6	0
San Joaquin	10.1%	4	1.4% <sup>†</sup>	2	8.7%	4	28.3%	4	2.6% <sup>†</sup>	1	15.1%	5	8.7% <sup>†</sup>	4	2	5
San Luis Obispo	7.6%	2	1.7% <sup>†</sup>	2	3.9%	1	23.7%	2	3.1% <sup>†</sup>	2	9.3% <sup>†</sup>	2	2.3% <sup>†</sup>	1	7	0
San Mateo	8.6%	3	1.2% <sup>†</sup>	1	7.6%	3	26.5%	3	3.8% <sup>†</sup>	3	14.3%	5	4.0% <sup>†</sup>	1	2	1
Santa Barbara	8.2%	3	1.0% <sup>†</sup>	1	5.8%	1	22.4%	1	5.2%	5	10.2% <sup>†</sup>	3	8.7% <sup>†</sup>	4	3	2
Santa Clara	6.7%	1	1.6%	2	5.3%	1	25.2%	2	2.9%	2	8.5%	2	8.5%	4	6	1
Santa Cruz	11.7%	5	0.5% <sup>†</sup>	1	7.3% <sup>†</sup>	2	24.4%	2	2.6% <sup>†</sup>	2	10.0% <sup>†</sup>	3	3.4% <sup>†</sup>	1	5	1
Shasta	10.7%	5	1.9% <sup>†</sup>	3	6.6%	2	32.0%	5	3.3%	2	9.6% <sup>†</sup>	3	–	–	2	2

	ADULTS (AGE 18 AND OLDER)										CHILDREN (AGE 1-17)				ALL AGES	
	WITH ACTIVE ASTHMA		WITH CONGESTIVE HEART FAILURE		WITH DIABETES		WITH HYPERTENSION		WITH PSYCH DISTRESS		WITH ACTIVE ASTHMA		WITH FAIR-POOR HEALTH STATUS		TOTAL NUMBER OF INDICATORS IN...	
	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	PERCENT	GROUP*	BEST TWO GROUPS	WORST TWO GROUPS
Solano	11.9%	5	3.3% <sup>†</sup>	5	9.4%	5	29.9%	5	5.5% <sup>†</sup>	5	8.8% <sup>†</sup>	2	4.4% <sup>†</sup>	2	2	5
Sonoma	7.8%	2	1.5% <sup>†</sup>	2	7.1%	2	23.8%	2	1.0% <sup>†</sup>	1	8.3% <sup>†</sup>	1	10.8% <sup>†</sup>	5	6	1
Stanislaus	10.2%	4	2.7% <sup>†</sup>	5	7.7%	3	32.6%	5	4.2%	4	10.3%	3	8.7% <sup>†</sup>	4	0	5
Sutter, Yuba	11.2%	5	2.0%	4	9.0%	4	32.9%	5	7.6%	5	13.4%	4	4.8% <sup>†</sup>	2	1	6
Tehama, Glenn, Colusa	19.1%	5	2.5%	5	10.0%	5	31.2%	5	8.7%	5	9.0% <sup>†</sup>	2	13.5% <sup>†</sup>	5	1	6
Tulare	7.4%	2	1.1% <sup>†</sup>	1	11.3%	5	27.3%	3	5.2%	5	12.4%	4	10.8%	5	2	4
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	8.5%	3	4.3%	5	10.1%	5	34.2%	5	4.4%	4	13.6% <sup>†</sup>	4	–	–	0	5
Ventura	8.7%	3	1.7% <sup>†</sup>	3	9.5%	5	27.0%	3	5.2% <sup>†</sup>	5	7.9% <sup>†</sup>	1	3.6% <sup>†</sup>	1	2	2
Yolo	9.6%	4	1.2% <sup>†</sup>	1	7.1%	2	22.1%	1	2.4% <sup>†</sup>	1	8.4%	2	5.8% <sup>†</sup>	3	5	1

\*The rates from counties and SPAs were ranked from lowest to highest and then divided into five groups or quintiles. Group 1 reflects counties or SPAs with the least amount of chronic conditions (best rates). Group 5 reflects counties or SPAs with the highest amount of a chronic conditions (worst rates).

<sup>†</sup>Indicates an unstable estimate.

Dash (–) indicates the sample size is too small to provide an estimate.

Notes: Adult Chronic Condition Index is computed from adults who reported one or more of the following conditions: active asthma, congestive heart failure, diabetes, hypertension, or psychological distress. Child Chronic Condition Index is computed from children (ages 1 to 17) who reported one of the following conditions: active asthma or health status of fair or poor.

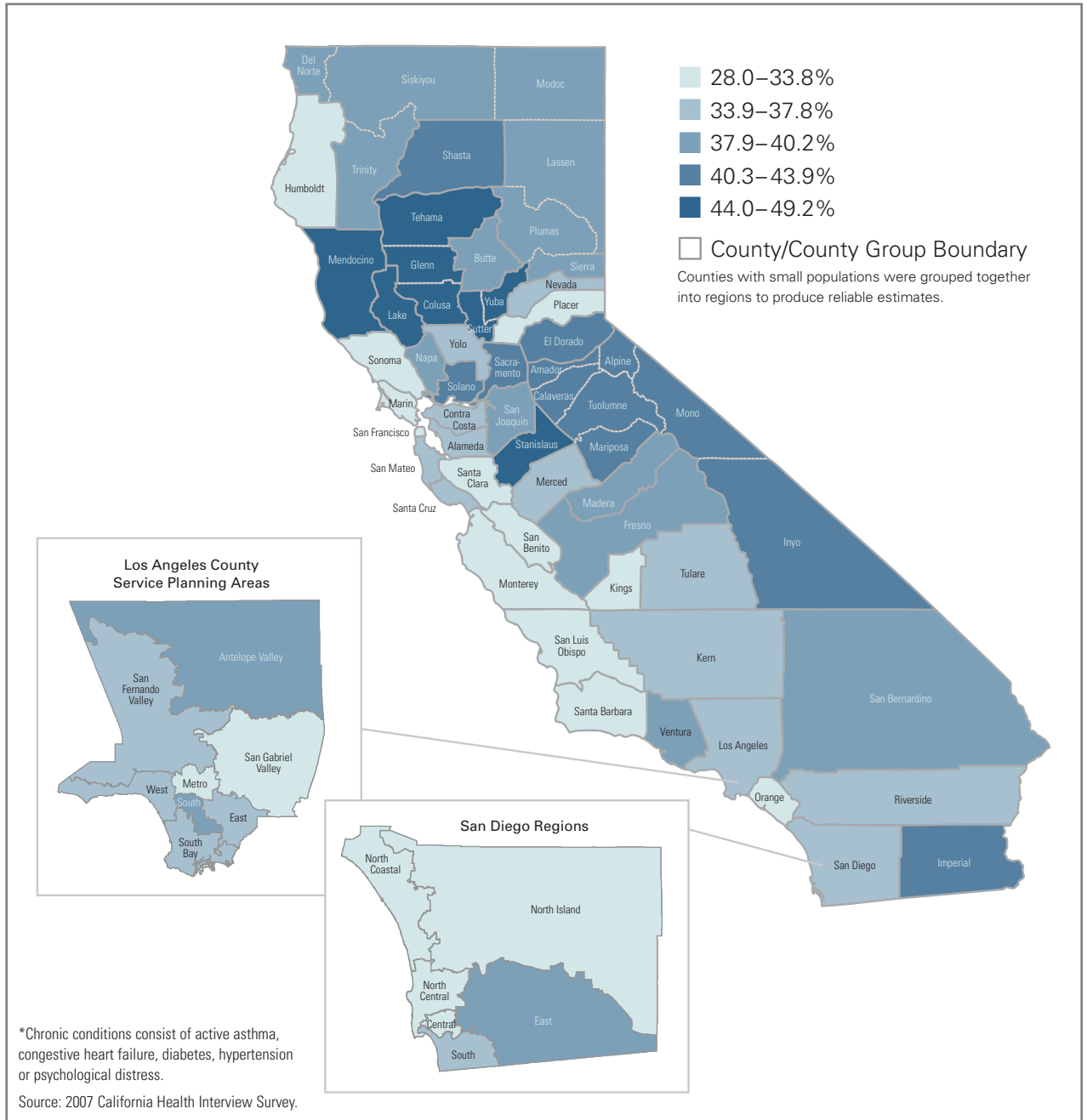
Source: 2007 California Health Interview Survey.

## Adult Chronic Condition Indices

**Prevalence.** In 2007, three out of ten California adults (36.0 percent) reported having at least one chronic health condition (including active asthma, CHF, diabetes, hypertension, or psychological distress). The proportion varied from 28.0 percent in Marin County to 49.2 percent in the Tehama/ Glenn/Colusa County cluster (Table 1). In addition to Marin County, the California areas with the lowest proportion of adult chronic conditions included Placer County (29.9 percent), the Los Angeles SPA 4-Metro (30.6 percent), the San Diego North Coastal region (31.6 percent), Sonoma County (31.7 percent), and Orange County (31.9 percent). Areas with the highest proportion of adult chronic conditions included Sutter/Yuba counties (44.1 percent), Stanislaus County (44.5 percent), Lake County (46.9 percent), Mendocino County (47.0 percent), and the Tehama/Glenn/Colusa County cluster (49.2 percent). To provide a snapshot of the chronic condition landscape across California, Map 1 presents the total proportion of adults reporting one or more chronic condition.

**Frequent health care utilization.** Among adults reporting a chronic condition, health care services are necessary to prevent and avoid further complications related to these health conditions. High rates of frequent users in an area may indicate a health care system that is less adequately controlling chronic conditions. It may also indicate that the underlying severity of chronic

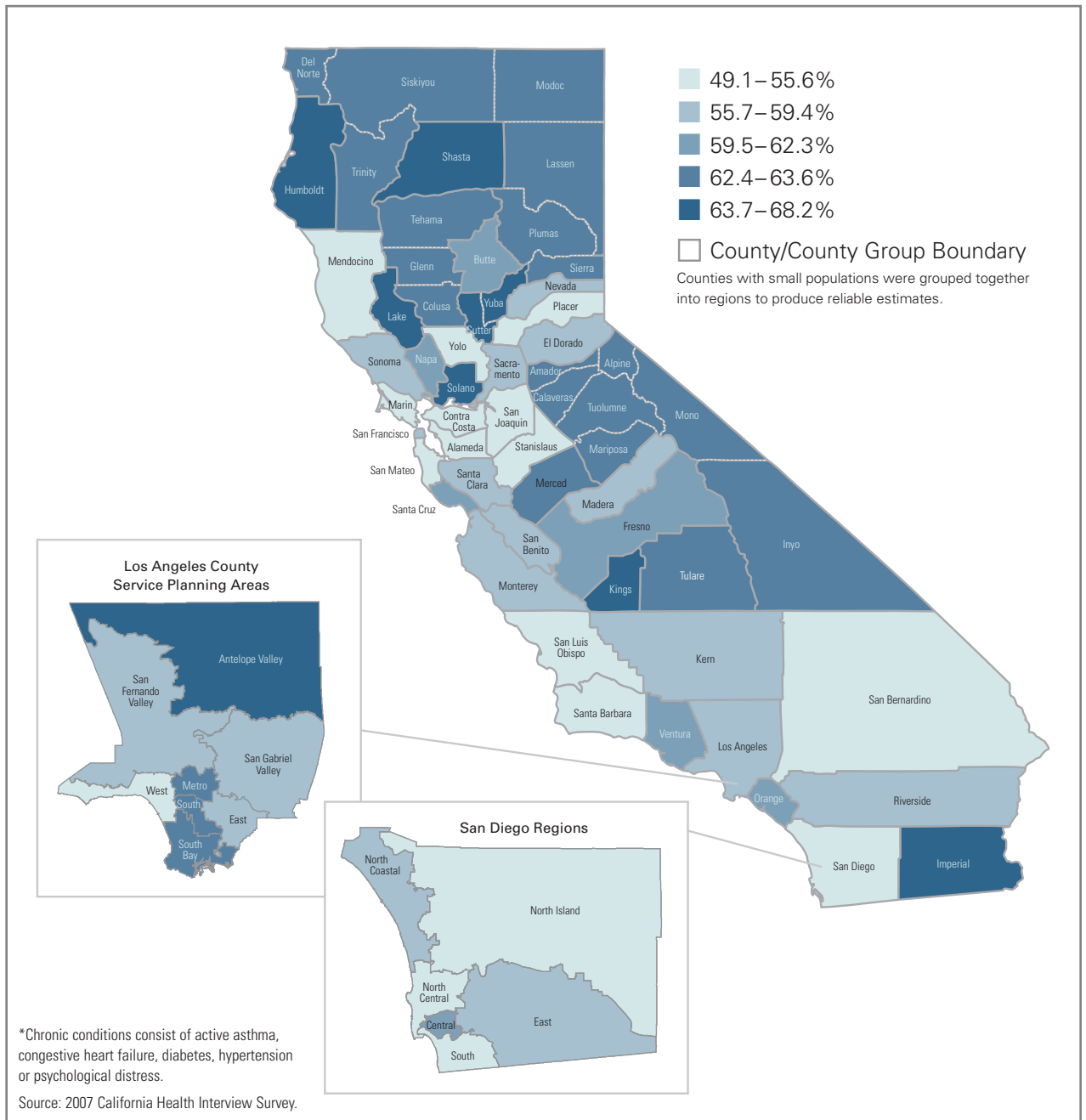
Map 1. Percentage of Adults with One or More Chronic Conditions,\* by County, 2007



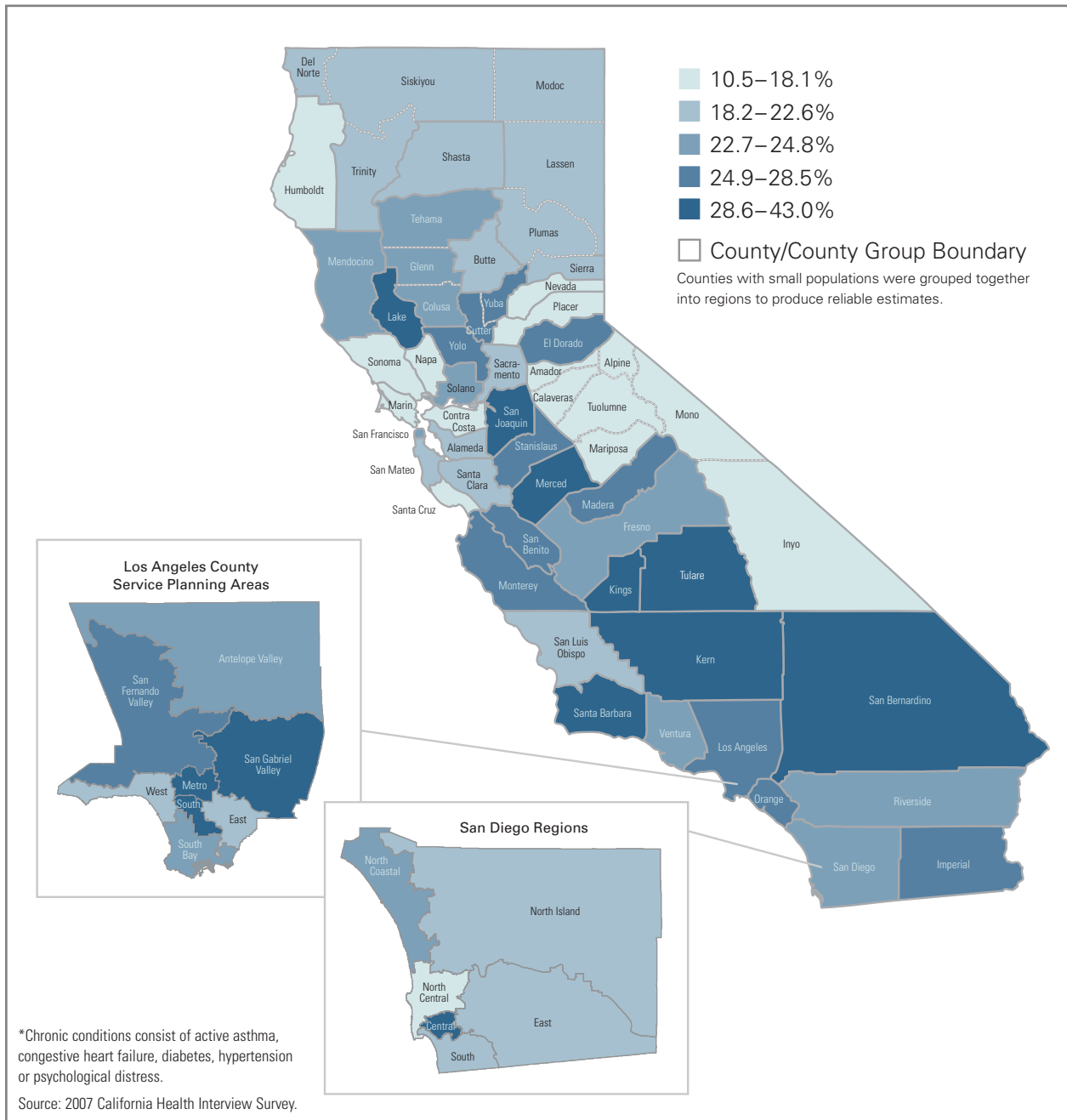
conditions in that area is higher than average. Over half of California adults responding that they have a chronic condition (57.7 percent) also reported frequent health care utilization, defined as visiting the doctor at least four times or going to the ER in the past year. However, the variation between counties/regions is large, ranging from 49.1 percent in Yolo County to 68.2 percent in Sutter/Yuba counties. In addition to Yolo County, the California areas with the lowest proportion of frequent health care utilization include Placer County (49.9 percent), San Mateo County (50.5 percent), Mendocino County (50.7 percent), and Santa Barbara County (50.8 percent). Areas with the highest proportion of health care utilization include Lake County (65.0 percent), Humboldt County (66.1 percent), Kings County (67.3 percent), Los Angeles SPA 1-Antelope Valley (67.3 percent), and Sutter/Yuba counties (68.2 percent). Map 2 presents this wide variation of frequent health care use among adults reporting a chronic condition.

**Barriers to health care.** Barriers to health care, such as lack of health insurance, no usual source of care, and difficulty communicating with doctors, may exacerbate chronic conditions and lead to preventable complications and avoidable hospitalizations. Overall, one-quarter of California adults reporting at least one chronic condition reported having barriers to health care (25.0 percent). Marin County reported the lowest proportion at 10.5 percent, compared

**Map 2. Percentage of Adults with One or More Chronic Conditions\* with Frequent Health Care Use, 2007**



**Map 3. Percentage of Adults with One or More Chronic Conditions\* with Barriers to Health Care Use, 2007**



to Los Angeles SPA 4-Metro which reported the highest proportion at 42.4 percent. In addition to Marin County, the California areas with the lowest proportion of barriers to care include Sonoma County (12.6 percent), Placer County (16.4 percent), Contra Costa County (16.4 percent), and Nevada County (16.5 percent). Areas with the highest proportion of barriers to health care include Santa Barbara County (33.7 percent), the San Diego Central region (37.2 percent), Merced County (37.7 percent), Los Angeles SPA 6-South (41.4 percent), and Los Angeles SPA 4-Metro (42.4 percent). Map 3 shows the percentages of barriers to health care by county and region.

### Children Chronic Condition Indices

**Prevalence.** For children ages 1 to 17, one in six (16.0 percent) reported having at least one chronic health condition in 2007 (including active asthma or fair-to-poor health status). The proportion varied from 7.2 percent in Butte County to 22.7 percent in Imperial County (see Table 1). In addition to Butte, the California areas with the lowest proportion of children with chronic conditions included Marin County (7.7 percent), San Diego North Inland region (8.3 percent), San Diego North Central region (9.8 percent), and El Dorado County (10.2 percent). Areas with the highest proportion of children with chronic conditions included Kings County (21.4 percent), Tulare County (21.7 percent), Fresno County

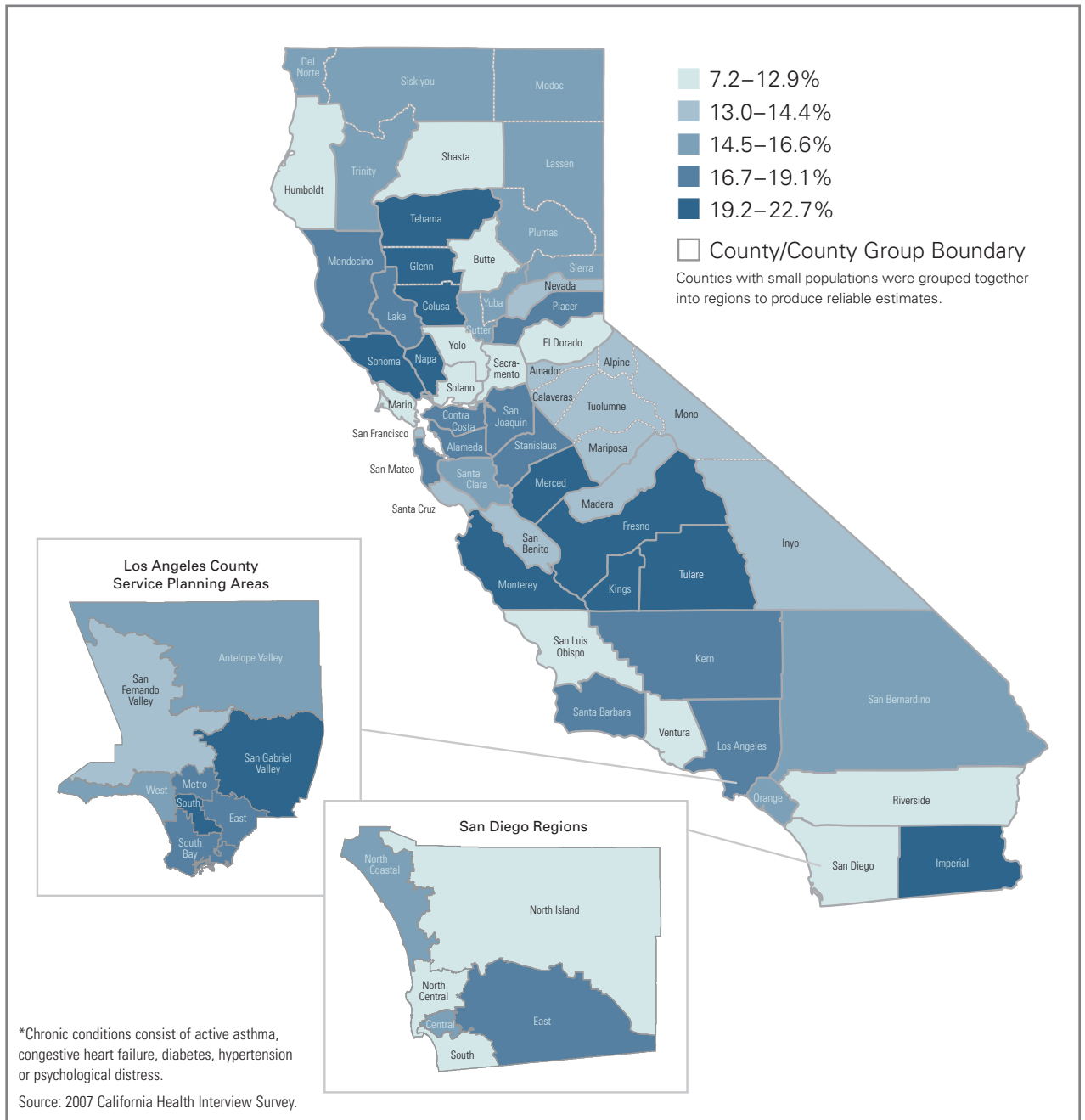


(21.8 percent), Monterey County (22.5 percent), and Imperial County (22.7 percent). To provide a snapshot of the chronic condition landscape across California, Map 4 presents the total percentage of children reporting one or more chronic conditions.

**Frequent health care utilization.** Among children reporting a chronic condition, access and utilization of health care services are necessary to prevent and avoid further complications related to these health conditions. Over half of California children reporting a chronic condition (60.7 percent) reported frequent health care utilization such as three or more doctor visits in the past year or having an ER visit in the past year. San Francisco County reported the lowest proportion at 21.4 percent, compared to Shasta County which reported the highest proportion at 85.2 percent. In addition to San Francisco County, the California areas with the lowest proportion of health care utilization included the Tuolumne/Calaveras/Amador/Inyo/Mariposa/Mono/Alpine County cluster (25.7 percent), Los Angeles SPA 5-West (30.1 percent), Santa Barbara County (33.8 percent), and San Mateo County (35.2 percent). Areas with the highest proportion of health care utilization included Imperial County (78.2 percent), the Tehama/Glenn/Colusa County cluster (79.1 percent), the San Diego North Central region (80.7 percent), Marin County (81.7 percent), and Shasta County (85.2 percent).

**Barriers to health care.** Barriers to health care, such as lack of health insurance, no usual

**Map 4. Percentage of Children with One or More Chronic Conditions,\* by County, 2007**



source of care, and difficulty communicating with doctors, may exacerbate and lead to preventable complications. Overall, almost one-fourth of California children reporting at least one chronic condition reported having barriers to health care (22.7 percent). However, the variation between counties/regions was large, ranging from 10.4 percent in the San Diego North Inland region to 40.1 percent in Sonoma County. In addition to San Diego region 6-North Inland, the California areas with the lowest proportion of barriers to care included Tulare County (11.2 percent), San Mateo County (11.3 percent), Los Angeles SPA 5-West (12.6 percent), and the Tehama/Glenn/Colusa County cluster (12.7 percent). Areas with the highest proportion of barriers to health care include Madera County (32.3 percent), the Tuolumne/Calaveras/Amador/Inyo/Mariposa/Mono/Alpine County cluster (35.3 percent), Shasta County (38.1 percent), San Benito County (38.3 percent), and Sonoma County (40.1 percent).

## II. Adult Chronic Conditions Prevalence and Characteristics

THIS CHAPTER PROVIDES DATA ABOUT THE prevalence (percent reporting) for the following adult chronic conditions: active asthma, CHF, diabetes, hypertension, and psychological distress. Since the prevalence rate is based on the total county population, it is possible to compare the prevalence of chronic conditions between counties (or by county cluster and sub-county areas). Additional details about the characteristics of adults living with each specific chronic condition are provided, including demographic characteristics (e.g., low-income and older adults), health care coverage (e.g., uninsured or enrolled in Medi-Cal), and frequent health care utilization (e.g., average doctor visits or ER visit in the past year). Since the characteristics are only presented for adults reporting a chronic condition, these rates should not be compared between counties (or county cluster or sub-county areas) and should be examined only within the county-context.

Demographic characteristics and frequent health care utilization data are presented for the total adult population (with and without chronic conditions). These total population data can be used to compare the demographic characteristics and frequent health care utilization of the entire county population with data on only the adults with chronic conditions in the same county (see

Tables 3.1 and 3.2). Examples of this are given for each condition.

**Total population characteristics.** In 2007, there were an estimated 27 million adults ages 18 and over living in California (see Table 3.1). Older adults ages 65 and over make up 14.5 percent of the total adult population. Among California adults, one-third (30.9 percent) reported being low-income. Twelve percent of adults reported having Medi-Cal coverage. However, one-quarter of Californians (23.8 percent) ages 18 to 64 reported being uninsured at some point in the past year. Thirty-three percent of all adults saw a doctor at least four times in the past year, and only 18.8 percent went to the ER in the past year. The

diversity of Californians is reflected in the racial and ethnic makeup of the state. Across California, 29.0 percent of the adult population was Latino, 12.7 percent Asian, 5.7 percent African American, 4.1 percent American Indian and Alaska Native, and 1.1 percent other single/two or more races. Almost half of California adults (47.5 percent) were White (see Table 3.2). Regional variations were evident, with Latinos making up 39.3 percent and 37.3 percent of all adults in Los Angeles County and San Joaquin Valley region, respectively. In Bay Area counties and Los Angeles County, Asians made up 21.3 percent and 14.7 percent, respectively, of the total regional population.

**Table 3.1 Total Adult Population, by Demographic, 2007**

	TOTAL ADULT POPULATION	LOW-INCOME	WITH MEDI-CAL	AGE 65+	IN PAST 12 MONTHS...		AGES 18-64	
					ER VISIT	FOUR OR MORE MD VISITS	TOTAL NUMBER	UNINSURED
<b>California</b>	<b>26,874,000</b>	<b>30.9%</b>	<b>12.0%</b>	<b>14.5%</b>	<b>18.8%</b>	<b>33.1%</b>	<b>22,973,000</b>	<b>23.8%</b>
Alameda	1,134,000	25.1%	14.0%	13.7%	20.6%	33.6%	978,000	13.1%
Butte	164,000	36.0%	15.9%	18.4%	17.8%	37.7%	134,000	25.3%
Contra Costa	775,000	20.5%	10.4%	15.4%	20.0%	32.9%	656,000	16.4%
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	113,000	38.4%	16.5%	21.9%	24.0%	32.8%	88,000	29.3%
El Dorado	137,000	17.3%	6.1%	17.5%	19.1%	30.8%	113,000	16.9%
Fresno	628,000	39.9%	21.5%	13.0%	17.3%	34.5%	547,000	24.8%

	TOTAL ADULT POPULATION	LOW-INCOME	WITH MEDI-CAL	IN PAST 12 MONTHS...			AGES 18-64	
				AGE 65+	ER VISIT	FOUR OR MORE MD VISITS	TOTAL NUMBER	UNINSURED
Humboldt	100,000	30.2%	13.7%	15.5%	22.0%	28.6%	84,000	19.3%
Imperial	119,000	47.8%	20.9%	14.5%	17.2%	32.1%	102,000	27.1%
Kern	533,000	39.9%	14.1%	12.2%	19.7%	33.6%	468,000	33.9%
Kings	92,000	40.9%	16.7%	11.2%	22.8%	37.9%	82,000	28.0%
Lake	50,000	41.3%	18.7%	25.1%	24.2%	43.3%	38,000	24.2%
Los Angeles	7,328,000	38.2%	15.3%	14.2%	18.0%	33.1%	6,288,000	28.6%
SPA 1 –Antelope Valley	230,000	33.1%	15.9%	13.4%	25.3%	34.8%	199,000	23.9%
SPA 2 –San Fernando	1,522,000	27.9%	11.1%	14.6%	19.2%	34.0%	1,299,000	24.8%
SPA 3 –San Gabriel Valley	1,386,000	36.7%	13.4%	14.7%	15.2%	32.2%	1,182,000	26.6%
SPA 4 –Metro	880,000	50.2%	18.9%	11.1%	17.0%	27.8%	782,000	41.1%
SPA 5 –West Area	520,000	17.4%	7.2%	17.7%	13.4%	36.2%	428,000	15.3%
SPA 6 –South	668,000	67.3%	32.0%	12.9%	22.0%	28.2%	582,000	38.8%
SPA 7 –East Area	948,000	41.3%	15.5%	14.6%	17.1%	34.8%	809,000	27.9%
SPA 8 –South Bay	1,176,000	35.6%	14.4%	14.3%	19.7%	36.6%	1,008,000	27.4%
Madera	98,000	45.3%	14.8%	16.7%	24.2%	32.7%	82,000	38.0%
Marin	189,000	15.2%	5.8% *	19.4%	18.9%	30.9%	153,000	17.2%
Mendocino	68,000	41.2%	19.2%	18.2%	22.2%	34.4%	56,000	26.0%
Merced	171,000	48.3%	22.3%	12.6%	14.8%	32.1%	150,000	35.0%
Monterey	291,000	35.7%	11.6%	15.0%	17.9%	29.0%	247,000	36.1%
Napa	96,000	19.9%	7.4%	18.3%	20.3%	34.5%	79,000	16.2%
Nevada	80,000	21.7%	5.8%	22.1%	22.6%	31.7%	62,000	22.4%
Orange	2,256,000	27.9%	7.2%	13.7%	18.0%	34.3%	1,946,000	24.3%
Placer	238,000	14.5%	3.6% *	18.3%	14.4%	32.4%	195,000	9.8%
Riverside	1,403,000	31.2%	9.6%	14.8%	18.9%	32.1%	1,196,000	26.4%
Sacramento	1,003,000	26.6%	12.9%	14.5%	18.5%	32.8%	857,000	16.1%
San Benito	41,000	26.7%	8.2%	12.1%	17.6%	36.0%	36,000	25.2%
San Bernardino	1,382,000	31.8%	10.4%	12.0%	23.1%	28.9%	1,216,000	23.8%

	TOTAL ADULT POPULATION	LOW-INCOME	WITH MEDI-CAL	IN PAST 12 MONTHS...			AGES 18-64	
				AGE 65+	ER VISIT	FOUR OR MORE MD VISITS	TOTAL NUMBER	UNINSURED
San Diego	2,198,000	24.5%	8.5%	14.5%	19.3%	33.1%	1,881,000	23.4%
1-North Coastal	367,000	22.4%	5.3%	15.6%	19.9%	35.3%	310,000	22.5%
2-North Central	442,000	17.1%	5.7% *	16.1%	17.7%	29.8%	371,000	16.0%
3-Central	370,000	37.5%	13.6%	10.7%	16.9%	31.4%	330,000	34.4%
4-South	286,000	28.2%	9.5%	14.9%	22.1%	33.7%	243,000	26.6%
5-East	356,000	23.8%	10.6%	15.5%	17.7%	36.2%	301,000	22.2%
6-North Inland	378,000	20.0%	7.4%	13.9%	22.4%	32.9%	325,000	20.5%
San Francisco	674,000	24.0%	10.1%	16.1%	22.0%	29.6%	565,000	14.8%
San Joaquin	443,000	30.7%	9.1%	14.2%	17.3%	27.4%	380,000	28.2%
San Luis Obispo	192,000	26.9%	5.4%	20.4%	17.0%	26.7%	153,000	23.1%
San Mateo	558,000	18.2%	5.9%	15.7%	15.6%	33.2%	470,000	13.8%
Santa Barbara	300,000	31.6%	10.8%	16.8%	16.1%	32.3%	250,000	19.5%
Santa Clara	1,321,000	23.7%	9.0%	14.4%	18.2%	33.8%	1,130,000	18.1%
Santa Cruz	197,000	29.7%	12.6%	11.8%	18.9%	31.0%	174,000	22.6%
Shasta	136,000	36.8%	14.2%	19.5%	22.4%	40.6%	109,000	28.8%
Solano	298,000	21.5%	14.5%	13.7%	23.0%	38.5%	257,000	17.8%
Sonoma	355,000	19.2%	8.7%	15.7%	14.3%	35.0%	299,000	15.1%
Stanislaus	348,000	35.9%	13.8%	14.0%	20.1%	39.9%	299,000	27.9%
Sutter, Yuba	112,000	37.8%	16.8%	15.7%	24.4%	41.8%	94,000	24.4%
Tehama, Glenn, Colusa	82,000	48.4%	19.0%	18.6%	20.0%	38.6%	66,000	29.8%
Tulare	288,000	44.8%	21.3%	13.0%	16.0%	37.4%	250,000	28.6%
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	148,000	23.9%	8.2%	25.4%	24.1%	38.4%	110,000	23.8%
Ventura	596,000	20.8%	9.5%	14.4%	17.9%	37.0%	511,000	20.3%
Yolo	139,000	29.9%	5.9%	12.2%	18.3%	31.5%	122,000	19.7%

\*Indicates an unstable estimate.

Source: 2007 California Health Interview Survey.

**Table 3.2. Total Adult Population, by Race/Ethnicity and Region, 2007**

	TOTAL ADULT POPULATION	LATINO	AMERICAN INDIAN/ ALASKA NATIVE	ASIAN	AFRICAN AMERICAN	WHITE	OTHER SINGLE/ TWO OR MORE RACES
<b>California</b>	<b>26,874,000</b>	<b>29.0%</b>	<b>4.1%</b>	<b>12.7%</b>	<b>5.7%</b>	<b>47.5%</b>	<b>1.1%</b>
Northern/Sierra Counties	1,052,000	9.8%	5.8%	2.5%	0.7%	80.4%	0.8%
Bay Area Counties	5,399,000	17.1%	3.4%	21.3%	6.2%	50.5%	1.5%
Sacramento Area Counties	1,517,000	14.2%	4.5%	10.2%	6.1%	63.4%	1.6%
San Joaquin Valley Counties	2,601,000	37.3%	5.3%	6.8%	3.7%	46.3%	0.6%
Central Coast Counties	1,618,000	28.3%	5.3%	5.3%	1.9%	58.0%	1.1%
Los Angeles County	7,328,000	39.3%	3.9%	14.7%	8.5%	32.6%	1.0%
Other Southern California Counties	7,358,000	30.3%	3.8%	10.0%	4.6%	50.3%	1.0%

\*Indicates an unstable estimate.

Notes: Race/ethnicity is defined in the Appendix under "Variables." Totals may not add up to 100 percent due to rounding.

Source: 2007 California Health Interview Survey.

**Table 4.1. Adults with Active Asthma in the Past 12 Months, 2007**

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH ACTIVE ASTHMA						
				LOW-INCOME	IN PAST 12 MOS...			AGES 18-64		
					WITH MEDI-CAL	AGE 65+	ER VISIT	4+ MD VISITS	TOTAL NUMBER	UNINSURED
<b>California</b>	<b>26,874,000</b>	<b>2,181,000</b>	<b>8.1%</b>	<b>32.3%</b>	<b>19.1%</b>	<b>14.1%</b>	<b>33.7%</b>	<b>50.7%</b>	<b>1,873,000</b>	<b>17.4%</b>
Alameda	1,134,000	101,000	8.9%	17.7%	16.8%	12.8%	37.2%	41.4%	88,000	12.5%*
Butte	164,000	19,000	11.3%	55.6%	34.5%	20.5%	26.4%	57.1%	15,000	10.8%*
Contra Costa	775,000	69,000	8.9%	14.7%	7.1%*	14.6%	23.4%	41.0%	59,000	11.6%*
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	113,000	9,000	8.4%	55.2%	38.6%	15.2%*	45.4%	61.4%	8,000	22.8%*
El Dorado	137,000	12,000	8.9%	12.3%*	–	18.3%*	28.9%	47.9%	10,000	9.3%*
Fresno	628,000	72,000	11.5%	41.6%	38.9%	8.7%	33.5%	57.1%	66,000	12.2%*
Humboldt	100,000	7,000	7.2%	28.6%	25.9%	14.0%	34.3%	53.4%	6,000	12.1%*
Imperial	119,000	12,000	10.1%	41.4%	21.7%	13.8%	34.4%	54.4%	10,000	16.9%*
Kern	533,000	60,000	11.4%	52.6%	26.0%	15.7%*	22.2%	51.8%	51,000	31.8%*
Kings	92,000	8,000	8.2%	42.0%	23.9%*	8.0%*	54.1%	72.0%	7,000	16.0%*

## Active Asthma

Asthma is a common chronic respiratory disease that affects people of all ages. People with asthma often experience “episodes or attacks of inflammation and narrowing of small airways in response to asthma triggers” such as allergens, air pollutants, exercise, or changes in the weather.<sup>9</sup> In 2007, 13 percent of California adults reported that they were “ever diagnosed with asthma.”<sup>10</sup> While some adults with asthma experience attacks that vary from mild to life-threatening, others may not experience any symptoms in the past year. By identifying adults with current or active asthma symptoms in the course of a year, a better understanding of demographic characteristics, health care utilization, and barriers to care among adults living with asthma can be gained.

**Statewide characteristics.** In 2007, an estimated 2.2 million Californians ages 18 and over (8.1 percent) reported an asthma episode in the past year (see Table 4.1). Among California adults reporting active asthma, almost one-third (32.3 percent) reported being low-income, which is fairly similar to the percentage of low-income adults among all Californians (30.9 percent). Adults ages 65 and over were similarly represented among adults reporting active asthma (14.1 percent) and in the total adult population (14.5 percent). Health care coverage was slightly better than the statewide average for California adults reporting active asthma. Among adults with active asthma, 17.4 percent reported being

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH ACTIVE ASTHMA							TOTAL NUMBER	UNINSURED
				LOW-INCOME	WITH MEDI-CAL	AGE 65+	IN PAST 12 MOS...		AGES 18-64			
							ER VISIT	4+ MD VISITS				
Lake	50,000	5,000	9.6%	50.5%	25.5%	21.3%	52.7%	53.6%	4,000	14.7%		
Los Angeles	7,328,000	500,000	6.8%	33.9%	20.4%	15.2%	33.3%	54.3%	424,000	19.1%		
SPA 1 – Antelope Valley	230,000	23,000	10.0%	34.4%	26.0%	18.0% *	38.4%	72.5%	19,000	6.7% *		
SPA 2 – San Fernando	1,522,000	105,000	6.9%	16.5%	7.3% *	11.1%	34.4%	54.1%	93,000	16.3%		
SPA 3 – San Gabriel Valley	1,386,000	74,000	5.4%	43.7%	20.3%	15.3%	31.3%	56.7%	63,000	23.0%		
SPA 4 – Metro	880,000	46,000	5.3%	61.0%	24.4%	18.7%	40.3%	47.8%	38,000	34.8%		
SPA 5 – West Area	520,000	42,000	8.0%	5.3% *	2.3% *	21.2%	13.2% *	59.0%	33,000	25.9% *		
SPA 6 – South	668,000	56,000	8.3%	65.5%	55.2%	16.3% *	44.9%	58.8%	47,000	12.8% *		
SPA 7 – East Area	948,000	58,000	6.2%	28.0%	19.4%	14.4%	32.4%	51.0%	50,000	17.1% *		
SPA 8 – South Bay	1,176,000	95,000	8.1%	29.4%	19.9% *	14.6%	31.5%	48.6%	82,000	16.9% *		
Madera	98,000	11,000	10.8%	44.7%	27.3%	16.6% *	34.9%	54.6%	9,000	17.9% *		
Marin	189,000	14,000	7.2%	3.9% *	5.5% *	15.1% *	30.9% *	34.4% *	11,000	–		
Mendocino	68,000	6,000	8.2%	54.9%	27.9%	16.1% *	39.7%	66.2%	5,000	16.8% *		
Merced	171,000	25,000	14.7%	35.5%	43.4% *	15.9% *	22.0% *	58.9%	21,000	7.9% *		
Monterey	291,000	19,000	6.7%	31.2%	18.3% *	8.2%	41.9%	54.0%	18,000	14.7% *		
Napa	96,000	9,000	9.3%	22.4% *	14.6% *	20.6%	36.4%	47.3%	7,000	16.1% *		
Nevada	80,000	7,000	9.0%	26.4%	14.6% *	15.8%	46.3%	39.3%	6,000	17.5% *		
Orange	2,256,000	147,000	6.5%	31.9%	8.5%	16.4%	28.2%	49.2%	123,000	26.4%		
Placer	238,000	16,000	6.8%	23.9% *	14.5% *	21.7% *	31.7%	61.7%	13,000	10.3% *		
Riverside	1,403,000	89,000	6.3%	40.2%	15.2%	18.1%	33.9%	46.3%	73,000	18.6% *		
Sacramento	1,003,000	134,000	13.3%	41.1%	30.1%	10.5%	37.1%	52.6%	120,000	11.3% *		
San Benito	41,000	5,000	11.3% *	60.0% *	–	12.1% *	14.0% *	31.1% *	4,000	59.5% *		
San Bernardino	1,382,000	124,000	9.0%	32.2%	18.6%	11.1%	35.2%	43.0%	110,000	22.7%		
San Diego	2,198,000	176,000	8.0%	29.4%	18.5%	13.2%	36.0%	58.9%	152,000	14.5%		
1 – North Coastal	367,000	18,000	4.9%	29.5% *	30.0% *	23.0%	30.6%	46.2%	14,000	6.5% *		

uninsured at some point in the past year, which was lower than the 23.8 percent for all adults statewide. Nineteen percent with active asthma had Medi-Cal coverage, compared to 12.0 percent of all California adults. Health care utilization was much higher among California adults reporting active asthma compared to all California adults. Half of adults (50.7 percent) reporting active asthma saw a doctor at least four times in the past year, and 33.7 percent went to the ER.

**County prevalence.** The prevalence of adult active asthma ranged from 4.9 percent in the San Diego North Coastal region to 19.1 percent in the Tehama/Glenn/Colusa County cluster. In addition to San Diego region 1-North Coastal, the California areas with the lowest proportion of adult active asthma included Los Angeles SPA 4-Metro (5.3 percent), Los Angeles SPA 3-San Gabriel Valley (5.4 percent), Los Angeles SPA 7-East (6.2 percent), San Francisco County (6.3 percent), and Riverside County (6.3 percent). Areas with the highest proportion of adult active asthma included Santa Cruz County (11.7 percent), Solano County (11.9 percent), Sacramento (13.3 percent), Merced County (14.7 percent), and the Tehama/Glenn/Colusa County cluster (19.1 percent).

**County characteristics.** The characteristics of county residents with a chronic condition are determined in part by the characteristics of all county residents, so it is not possible to compare the characteristics of those with a chronic condition between counties. It is possible

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH ACTIVE ASTHMA							TOTAL NUMBER	UNINSURED
				LOW-INCOME	WITH MEDI-CAL	AGE 65+	IN PAST 12 MOS...		AGES 18-64			
							ER VISIT	4+ MD VISITS				
2-North Central	442,000	39,000	8.9%	15.0%*	6.8%*	14.7%	25.8%	53.3%	34,000	7.7%*		
3-Central	370,000	29,000	7.9%	51.0%	23.2%	10.0%*	45.7%	75.3%	26,000	12.9%*		
4-South	286,000	26,000	9.2%	17.7%*	10.5%*	12.9%*	56.4%	57.9%	23,000	13.6%*		
5-East	356,000	33,000	9.4%	47.8%	39.2%*	13.1%*	26.4%	72.7%	29,000	18.4%*		
6-North Inland	378,000	29,000	7.8%	16.5%	5.9%*	8.7%*	36.3%	43.1%	27,000	25.5%*		
San Francisco	674,000	42,000	6.3%	37.9%*	7.6%*	17.5%*	52.5%	33.4%*	35,000	29.3%*		
San Joaquin	443,000	45,000	10.1%	50.4%	17.8%*	11.8%*	34.3%	39.0%	39,000	42.1%		
San Luis Obispo	192,000	15,000	7.6%	21.0%*	8.9%*	9.6%*	25.2%*	32.9%	13,000	13.9%*		
San Mateo	558,000	48,000	8.6%	10.7%*	6.7%*	15.9%*	37.1%*	62.7%	40,000	3.0%*		
Santa Barbara	300,000	25,000	8.2%	27.7%*	11.7%*	9.1%*	21.4%*	29.2%	22,000	21.4%*		
Santa Clara	1,321,000	89,000	6.7%	19.2%	12.5%	15.7%	38.5%	52.1%	75,000	7.3%*		
Santa Cruz	197,000	23,000	11.7%	29.4%*	12.8%*	11.9%*	27.0%*	52.6%	20,000	6.2%*		
Shasta	136,000	15,000	10.7%	44.6%	14.0%*	14.9%*	56.8%	64.8%	12,000	35.8%*		
Solano	298,000	35,000	11.9%	20.5%*	37.2%*	11.1%*	56.1%	54.1%	31,000	-		
Sonoma	355,000	28,000	7.8%	21.8%*	9.4%*	19.9%	30.8%	41.1%	22,000	9.2%*		
Stanislaus	348,000	35,000	10.2%	36.8%*	25.1%*	10.3%*	22.7%*	51.3%	32,000	17.3%*		
Sutter, Yuba	112,000	13,000	11.2%	43.8%	26.7%	11.9%	46.5%	55.8%	11,000	25.8%		
Tehama, Glenn, Colusa	82,000	16,000	19.1%	54.1%	34.4%	12.2%*	36.1%	48.0%	14,000	16.2%*		
Tulare	288,000	21,000	7.4%	70.3%	39.8%	7.4%*	37.5%	60.9%	20,000	24.5%*		
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	148,000	13,000	8.5%	24.1%	19.6%*	24.0%	38.3%	55.3%	10,000	38.5%		
Ventura	596,000	52,000	8.7%	9.6%*	8.2%*	13.3%	19.4%*	44.7%	45,000	16.4%*		
Yolo	139,000	13,000	9.6%	46.7%*	11.9%*	14.1%*	20.1%*	35.9%	11,000	-		

\*Indicates an unstable estimate.

Dash (-) indicates the sample size is too small to provide an estimate.

Note: Active asthma is defined in the Appendix under "Variables."

Source: 2007 California Health Interview Survey.

to compare the characteristics of adults with active asthma to the characteristics of all adults in the same county, however. For example, in Fresno County, 33.5 percent of adults with active asthma used the emergency room in the past year (Table 4.1), which is almost twice as often as did all Fresno County adults (17.3 percent, Table 3.1).

**Racial and ethnic characteristics.** Among California adults reporting active asthma, the racial-ethnic distribution was 20.6 percent Latino, 6.0 percent American Indian/Alaska Native, 8.9 percent Asian, 8.2 percent African American, 54.6 percent White, and 1.7 percent other single/two or more races (see Table 4.2). Whites had a higher proportion of adult active asthma in comparison to their total adult population (54.6 percent versus 47.5 percent) (see also Table 3.2). Similarly, African Americans in California were over-represented in the adult population reporting active asthma (8.2 percent versus 5.7 percent). Programs targeting adults with active asthma need to include outreach to all racial and ethnic minorities in all regions of the state, but adults with active asthma were disproportionately Latino in the Sacramento Area counties; disproportionately African American in the Bay Area counties, Sacramento Area counties, San Joaquin Valley, Los Angeles County, and other Southern California counties; and disproportionately American Indian/Alaska Native in all California regions except for the Central Coast counties.



**Table 4.2. Adults with Active Asthma in the Past 12 Months, by Race/Ethnicity and Region, 2007**

	TOTAL	LATINO	AMERICAN INDIAN/ ALASKA NATIVE	ASIAN	AFRICAN AMERICAN	WHITE	OTHER SINGLE/ TWO OR MORE RACES
<b>California</b>	<b>2,181,000</b>	<b>20.6%</b>	<b>6.0%</b>	<b>8.9%</b>	<b>8.2%</b>	<b>54.6%</b>	<b>1.7%</b>
Northern/Sierra Counties	108,000	5.0%	8.6%	0.9% *	–	83.9%	1.2% *
Bay Area Counties	434,000	10.6%	3.9%	20.8%	7.2%	54.9%	2.6% *
Sacramento Area Counties	175,000	15.7%	8.7% *	2.2% *	13.1%	57.7%	2.6%
San Joaquin Valley Counties	278,000	29.7%	7.1%	5.7%	4.0% *	53.0%	0.5% *
Central Coast Counties	138,000	17.0%	4.6% *	3.9% *	0.8% *	69.0%	4.6% *
Los Angeles County	500,000	27.9%	7.6%	9.3%	14.1%	40.0%	1.0% *
Other Southern California Counties	547,000	23.0%	4.7%	5.9%	7.4%	57.8%	1.3% *

\*Indicates an unstable estimate.

Dash (–) indicates the sample size is too small to provide an estimate.

Notes: Active asthma and race/ethnicity are defined in the Appendix under “Variables.” Totals may not add up to 100 percent due to rounding.

Source: 2007 California Health Interview Survey.

**Table 5.1. Adults Diagnosed with Congestive Heart Failure, 2007**

	TOTAL ADULT POPULATION	AMONG ADULTS WITH CONGESTIVE HEART FAILURE								
		NUMBER	PERCENT	IN PAST 12 MOS...					AGES 18–64	
				LOW- INCOME	WITH MEDI-CAL	AGE 65+	ER VISIT	4+ MD VISITS	TOTAL NUMBER	UNINSURED
<b>California</b>	<b>26,874,000</b>	<b>476,000</b>	<b>1.8%</b>	<b>43.8%</b>	<b>31.1%</b>	<b>56.8%</b>	<b>44.3%</b>	<b>71.7%</b>	<b>206,000</b>	<b>16.8%</b>
Alameda	1,134,000	20,000	1.8%	31.7% *	26.7% *	51.8%	70.8%	81.4%	10,000	–
Butte	164,000	3,000	2.0% *	61.3%	30.7% *	62.0% *	30.7% *	72.2%	1,000	–
Contra Costa	775,000	15,000	2.0%	27.1% *	15.7% *	49.1%	26.5% *	73.0%	8,000	–
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	113,000	2,000	2.0% *	28.8% *	23.0% *	73.5%	45.0% *	87.9%	1,000	–
El Dorado	137,000	2,000	1.4% *	28.3% *	–	39.8% *	67.9%	75.8%	1,000	–
Fresno	628,000	9,000	1.4% *	56.9%	21.8% *	63.0%	39.8% *	53.0% *	3,000	–
Humboldt	100,000	2,000	1.7%	34.0% *	38.8% *	64.9%	56.1%	58.0%	1,000	–
Imperial	119,000	3,000	2.2%	56.5%	26.4% *	71.1%	44.5%	74.9%	1,000	–
Kern	533,000	12,000	2.2% *	76.2%	42.5% *	85.6%	28.1% *	69.1%	2,000	–
Kings	92,000	2,000	2.0%	31.7% *	28.3% *	55.7%	37.3% *	86.2%	1,000	–

## Congestive Heart Failure (CHF)

Heart disease is the leading cause of death for both women and men in the U.S.<sup>11</sup> In 2007, 6.3 percent of California adults reported ever being diagnosed with heart disease.<sup>12</sup> One of the most serious heart conditions is CHF where the heart cannot pump enough blood and oxygen to meet the needs of other body organs.<sup>13</sup> People diagnosed with CHF can improve their quality of life and prevent hospitalizations by following a doctor’s recommended guidelines for prescribed medicine, physical activity, and diet. Yet barriers to health care may lead to unnecessary and preventable hospitalizations for adults reporting CHF.

**Statewide characteristics.** In 2007, almost half a million Californians ages 18 and over (1.8 percent) reported that they had been diagnosed with CHF (see Table 5.1). Compared to the total older adult population in California (14.5 percent), more than half of adults reporting CHF (56.8 percent) were ages 65 and older. Among California adults reporting CHF, two out of five (43.8 percent) reported being low-income, which is higher than the percentage of low-income adults among all Californians (30.9 percent). Healthcare coverage was slightly better than the statewide average for California adults reporting CHF. Among adults (ages 18 to 64) reporting CHF, 16.8 percent reported being uninsured in the past year, which was lower than the 23.8 percent of all adults (ages 18 to 64) statewide. Thirty-one percent of adults with CHF had Medi-Cal

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH CONGESTIVE HEART FAILURE							TOTAL NUMBER	UNINSURED
				LOW-INCOME	WITH MEDI-CAL	AGE 65+	IN PAST 12 MOS...		AGES 18-64			
							ER VISIT	4+ MD VISITS				
Lake	50,000	1,000	2.5%	42.5%	47.4%	73.7%	55.6%	89.5%	-	-		
Los Angeles	7,328,000	114,000	1.6%	51.7%	41.4%	57.0%	45.8%	72.1%	49,000	19.4%*		
SPA 1- Antelope Valley	230,000	5,000	2.2%*	34.0%*	31.1%*	48.3%*	56.2%	59.7%	3,000	-		
SPA 2- San Fernando	1,522,000	20,000	1.3%	27.8%*	45.0%*	37.7%*	61.7%	66.8%	13,000	4.7%*		
SPA 3- San Gabriel Valley	1,386,000	15,000	1.1%	47.8%	30.8%	68.8%	43.3%	67.6%	5,000	46.1%*		
SPA 4-Metro	880,000	15,000	1.8%	76.7%	48.1%	48.0%	47.3%	70.4%	8,000	49.2%*		
SPA 5-West Area	520,000	7,000	1.4%*	35.8%*	35.7%*	90.9%	54.2%	75.8%	1,000	-		
SPA 6-South	668,000	19,000	2.9%	93.3%	82.5%	53.6%	44.2%	79.5%	9,000	29.2%*		
SPA 7-East Area	948,000	12,000	1.3%	35.2%*	4.8%*	65.4%	45.0%	86.5%	4,000	-		
SPA 8-South Bay	1,176,000	19,000	1.6%	39.0%	27.0%*	62.5%	25.9%*	67.5%	7,000	-		
Madera	98,000	3,000	2.7%*	48.9%*	57.3%	67.1%	49.0%*	86.4%	1,000	-		
Marin	189,000	1,000	0.5%*	-	-	100.0%	-	-	-	-		
Mendocino	68,000	2,000	3.2%	27.6%*	-	62.3%	34.8%*	58.8%	1,000	-		
Merced	171,000	3,000	2.0%	67.0%	32.3%*	57.9%	47.6%*	89.1%	1,000	53.4%*		
Monterey	291,000	8,000	2.7%*	23.5%*	24.4%*	29.5%*	69.0%	74.6%	6,000	-		
Napa	96,000	2,000	2.4%*	-	-	75.1%	32.3%*	41.3%*	1,000	-		
Nevada	80,000	2,000	3.0%*	21.0%*	28.3%*	81.0%	21.5%*	63.3%	-	-		
Orange	2,256,000	37,000	1.6%	32.6%	17.2%*	70.1%	42.7%*	73.8%	11,000	-		
Placer	238,000	6,000	2.5%*	46.4%*	22.9%*	80.7%	56.4%	99.8%	1,000	-		
Riverside	1,403,000	25,000	1.8%	40.7%	13.1%*	45.5%	37.4%	50.0%	14,000	59.6%*		
Sacramento	1,003,000	24,000	2.4%	31.1%	22.8%*	64.0%	50.6%	67.7%	9,000	14.0%*		
San Benito	41,000	-	-	-	-	-	-	-	-	-		
San Bernardino	1,382,000	32,000	2.3%	46.0%	35.3%	44.2%	39.0%	60.6%	18,000	28.1%*		
San Diego	2,198,000	44,000	2.0%	55.6%	48.5%	54.5%	31.8%	72.6%	20,000	14.5%*		
1-North Coastal	367,000	4,000	1.0%*	36.2%*	40.7%*	75.1%	31.6%*	63.6%	1,000	-		

coverage, compared to 12.0 percent of all California adults. Health care utilization was substantially higher among California adults reporting CHF compared to all California adults. Almost three-quarters of adults reporting CHF saw a doctor at least four times in the past year (71.7 percent), and almost half went to the ER in the past year (44.3 percent).

**County prevalence.** The prevalence of CHF ranged from less than one percent in Marin and Santa Cruz counties (0.5 percent) to 4.3 percent in the Tuolumne/Calaveras/Amador/Inyo/Mariposa/Mono/Alpine county cluster. In addition to Marin and Santa Cruz counties, the California areas with the lowest proportion of adult CHF included the San Diego North Coastal region (1.0 percent), the San Diego North Central region (1.0 percent), and Santa Barbara County (1.0 percent). Areas with the highest proportion of adult CHF included Nevada County (3.0 percent), Mendocino County (3.2 percent), Solano County (3.3 percent), the San Diego East region (4.2 percent), and the Tuolumne/Calaveras/Amador/ Inyo/Mariposa/Mono/Alpine county cluster (4.3 percent).

**County characteristics.** The characteristics of county residents with a chronic condition are determined in part by the characteristics of all county residents, so it is not possible to compare the characteristics of those with a chronic condition between counties. It is possible to compare the characteristics of adults with CHF to the characteristics of all adults in the same

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH CONGESTIVE HEART FAILURE							
				IN PAST 12 MOS...				AGES 18-64			
				LOW-INCOME	WITH MEDI-CAL	AGE 65+	ER VISIT	4+ MD VISITS	TOTAL NUMBER	UNINSURED	
2-North Central	442,000	5,000	1.0% *	34.1% *	35.2% *	89.3%	33.4% *	72.7%	-	-	
3-Central	370,000	9,000	2.3% *	64.0%	61.8%	74.7%	42.5% *	60.3%	2,000	-	
4-South	286,000	5,000	1.8% *	59.5%	49.2% *	78.8%	18.5% *	49.6% *	1,000	-	
5-East	356,000	15,000	4.2% *	62.6% *	57.7% *	21.8% *	22.5% *	95.1%	12,000	-	
6-North Inland	378,000	7,000	1.8% *	51.4% *	23.6% *	49.4% *	48.0% *	60.2%	3,000	60.2% *	
San Francisco	674,000	8,000	1.2% *	24.9% *	32.0% *	57.9% *	75.6%	76.4%	3,000	-	
San Joaquin	443,000	6,000	1.4% *	33.3% *	-	70.2%	41.0% *	71.3%	2,000	-	
San Luis Obispo	192,000	3,000	1.7% *	40.8% *	31.2% *	70.8%	36.7% *	76.3% *	1,000	-	
San Mateo	558,000	6,000	1.2% *	9.5% *	15.4% *	64.9%	48.9% *	88.2%	2,000	-	
Santa Barbara	300,000	3,000	1.0% *	52.6% *	37.8% *	75.9%	67.4%	85.8%	1,000	-	
Santa Clara	1,321,000	21,000	1.6%	55.9%	30.7% *	51.9%	43.7% *	64.5%	10,000	-	
Santa Cruz	197,000	1,000	0.5% *	-	-	84.0%	60.4%	83.0%	-	-	
Shasta	136,000	3,000	1.9% *	22.7% *	23.1% *	57.3%	60.7%	92.2%	1,000	-	
Solano	298,000	10,000	3.3% *	11.6% *	55.0% *	49.0% *	71.7%	93.6%	5,000	-	
Sonoma	355,000	5,000	1.5% *	30.6% *	20.6% *	45.6% *	41.9% *	85.3%	3,000	25.2% *	
Stanislaus	348,000	9,000	2.7% *	52.8%	36.0% *	32.2% *	27.4% *	61.8%	6,000	40.1% *	
Sutter, Yuba	112,000	2,000	2.0%	28.1%	-	66.0%	39.2%	72.3%	1,000	-	
Tehama, Glenn, Colusa	82,000	2,000	2.5%	54.4%	-	71.7%	49.9%	79.7%	1,000	-	
Tulare	288,000	3,000	1.1% *	75.0% *	43.9% *	47.9% *	62.8%	96.8%	2,000	36.6% *	
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	148,000	6,000	4.3%	46.2%	29.1% *	70.3%	64.3%	71.5%	2,000	-	
Ventura	596,000	10,000	1.7% *	53.6% *	-	37.6% *	24.4% *	91.8%	6,000	19.0% *	
Yolo	139,000	2,000	1.2% *	-	-	66.8%	-	73.6%	1,000	-	

\*Indicates an unstable estimate.

Dash (-) indicates the sample size is too small to provide an estimate.

Note: Congestive heart failure is defined in the Appendix under "Variables."

Source: 2007 California Health Interview Survey.

county, however. For example, in Orange County, 70.1 percent of adults with CHF were ages 65 and over (Table 5.1), which was dramatically higher than the 13.7 percent of all Orange County adults who were elderly (Table 3.1). Note that due to the relatively low number of adults with CHF in many counties, the estimates of many of their characteristics are not statistically stable (indicated by an asterisk) and should be considered “ballpark” estimates.

**Racial and ethnic characteristics.** Among California adults reporting CHF, the racial-ethnic distribution was 20.2 percent Latino, 5.7 percent American Indian/Alaska Native, 9.0 percent Asian, 7.0 percent African American, 55.8 percent White, and 2.3 percent other single/two or more races (see Table 5.2). Compared to their total adult population in California, African Americans had a higher proportion of adults reporting having been diagnosed with CHF (5.7 percent versus 7.0 percent, see also Table 3.2). Similarly, American Indians/Alaska Natives were over-represented in the adult population reporting CHF (4.1 percent versus 5.7 percent). Programs targeting adults reporting CHF need to include outreach to all racial and ethnic minorities in all regions of the state, but adults reporting CHF were disproportionately African American in the Sacramento Area counties, San Joaquin Valley, Los Angeles County, and other Southern California counties, and disproportionately American Indian/Alaska Native in Northern/Sierra counties, Bay

**Table 5.2. Adults Diagnosed with Congestive Heart Failure, by Race/Ethnicity and Region, 2007**

	TOTAL	LATINO	AMERICAN INDIAN/ ALASKA NATIVE	ASIAN	AFRICAN AMERICAN	WHITE	OTHER SINGLE/ TWO OR MORE RACES
<b>California</b>	<b>476,000</b>	<b>20.2%</b>	<b>5.7%</b>	<b>9.0%</b>	<b>7.0%</b>	<b>55.8%</b>	<b>2.3%</b>
Northern/Sierra Counties	26,000	6.6% *	9.4% *	–	–	83.2%	–
Bay Area Counties	90,000	16.4% *	5.3% *	11.4% *	5.9% *	60.3%	0.8% *
Sacramento Area Counties	34,000	1.6% *	6.2% *	7.9% *	13.7% *	69.1%	1.5% *
San Joaquin Valley Counties	47,000	22.9%	6.8% *	6.0% *	4.3% *	59.0%	–
Central Coast Counties	26,000	10.7% *	18.0% *	2.9% *	–	51.7%	16.7% *
Los Angeles County	114,000	37.6%	2.4% *	11.9% *	11.5% *	33.0%	3.5% *
Other Southern California Counties	140,000	16.2%	5.2% *	9.3% *	6.0%	62.9%	0.5% *

\*Indicates an unstable estimate.

Dash (–) indicates the sample size is too small to provide an estimate.

Notes: Congestive heart failure and race/ethnicity are defined in the [Appendix](#) under “Variables.” Totals may not add up to 100 percent due to rounding.

Source: 2007 California Health Interview Survey.

Area counties, Sacramento Area counties, the San Joaquin Valley, Central Coast counties, and other Southern California counties.

## Diabetes

The number of people with diabetes has grown dramatically in the last fifteen years in the US.<sup>14</sup> Diabetes is a condition “marked by high levels of blood glucose resulting from defects in insulin production, insulin action, or both.”<sup>15</sup> If left untreated, diabetes can lead to serious complications (e.g., blindness, kidney damage, and lower-limb amputations) and premature death. As an ACSC, diabetes hospitalizations can be prevented through healthy diet, physical activity, and prescribed medication. Similar to other chronic conditions in this report, access to health care and disease management were key factors in reducing the burden of diabetes.

**Statewide characteristics.** In 2007, 2 million Californians ages 18 and over (7.8 percent) reported “ever having been diagnosed” with diabetes (see Table 6.1). Nationally, about one-quarter of people with diabetes do not know they have diabetes.<sup>16</sup> Thirty-four percent of California adults reporting diabetes were 65 or older, which is higher than the 14.5 percent for the total older adult population statewide. Compared to the total adult population who were low-income in California (30.9 percent), four out of ten California adults reporting diabetes were low-income (42.3 percent). Among adults (ages 18 to

**Table 6.1. Adults Diagnosed with Diabetes, 2007**

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH DIABETES						
				LOW-INCOME	WITH MEDI-CAL	AGE 65+	IN PAST 12 MOS...			AGES 18-64
							ER VISIT	4+ MD VISITS	TOTAL NUMBER	UNINSURED
<b>California</b>	<b>26,874,000</b>	<b>2,099,000</b>	<b>7.8%</b>	<b>42.3%</b>	<b>23.1%</b>	<b>34.1%</b>	<b>30.1%</b>	<b>62.8%</b>	<b>1,384,000</b>	<b>20.8%</b>
Alameda	1,134,000	88,000	7.8%	35.4%	19.7%	26.7%	39.0%	65.2%	65,000	5.5%*
Butte	164,000	11,000	6.7%	37.8%	21.7%	39.3%	26.4%	74.2%	7,000	11.3%*
Contra Costa	775,000	51,000	6.5%	35.6%*	15.7%*	30.7%	44.8%	46.6%	35,000	33.2%*
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	113,000	9,000	7.9%	40.7%	26.6%*	41.9%	42.9%	66.4%	5,000	20.4%*
El Dorado	137,000	10,000	6.9%	30.9%*	7.7%*	36.1%	34.7%*	42.1%	6,000	12.6%*
Fresno	628,000	66,000	10.5%	61.2%	41.7%	32.0%	23.3%	54.2%	45,000	23.1%*
Humboldt	100,000	7,000	6.7%	31.1%	16.8%*	31.3%	30.6%	74.0%	5,000	-
Imperial	119,000	13,000	11.0%	61.7%	38.1%	46.0%	20.5%	71.3%	7,000	22.4%*
Kern	533,000	50,000	9.3%	55.7%	13.2%*	31.4%	30.5%	65.4%	34,000	35.1%*
Kings	92,000	10,000	10.4%	59.2%	35.3%	38.0%	32.0%	70.5%	6,000	29.2%*
Lake	50,000	5,000	9.7%	50.5%	43.6%	45.5%	46.9%	84.4%	3,000	20.0%*
Los Angeles	7,328,000	642,000	8.8%	49.2%	26.3%	34.3%	28.8%	63.7%	422,000	27.2%
SPA 1 – Antelope Valley	230,000	18,000	8.0%	46.2%	44.7%	37.5%	44.1%	78.3%	12,000	18.7%*
SPA 2 – San Fernando	1,522,000	142,000	9.3%	37.1%	15.4%	28.2%	35.5%	68.4%	102,000	22.1%*
SPA 3 – San Gabriel Valley	1,386,000	117,000	8.5%	51.7%	19.1%	38.8%	19.2%	50.1%	72,000	45.7%*
SPA 4 – Metro	880,000	75,000	8.5%	61.3%	34.0%	25.0%	27.3%	64.2%	56,000	40.2%
SPA 5 – West Area	520,000	32,000	6.2%	33.6%*	32.1%*	42.5%	18.2%*	81.9%	18,000	-
SPA 6 – South	668,000	66,000	9.9%	65.1%	46.8%	36.9%	32.1%	67.5%	42,000	31.0%*
SPA 7 – East Area	948,000	97,000	10.2%	52.9%	25.8%	41.4%	28.6%	55.1%	57,000	14.7%*
SPA 8 – South Bay	1,176,000	95,000	8.0%	45.8%	26.1%	32.8%	30.5%	70.0%	64,000	20.9%*
Madera	98,000	8,000	8.1%	47.6%	28.6%*	49.1%	41.5%	77.1%	4,000	32.9%*
Marin	189,000	8,000	4.0%*	62.3%	51.1%*	26.3%*	27.7%*	82.9%	6,000	13.9%*

64) reporting diabetes, 20.8 percent reported being uninsured in the past year, which was similar to the 23.8 percent of adults (ages 18 to 64) statewide who reported being uninsured. Almost one-quarter of adults with diabetes had Medi-Cal coverage (23.1 percent), compared to 12.0 percent of all California adults. Two-thirds of adults reporting diabetes saw a doctor at least four times in the past year (62.8 percent), but only one-third went to the ER in the past year (30.1 percent).

**County prevalence.** The San Diego North Central region had the lowest prevalence of reported diabetes among adults at 3.8 percent, while Tulare County had the highest prevalence at 11.3 percent. In addition to the San Diego North Central region, the California areas with the lowest proportion of adult diabetes included San Luis Obispo County (3.9 percent), Marin County (4.0 percent), Nevada County (4.9 percent), and Santa Clara County (5.3 percent). Areas with the highest proportion of adult diabetes included Los Angeles SPA 7-East (10.2 percent), Kings County (10.4 percent), Fresno County (10.5 percent), Imperial County (11.0 percent), and Tulare County (11.3 percent).

**County characteristics.** The characteristics of county residents with a chronic condition are determined in part by the characteristics of all county residents, so it is not possible to compare the characteristics of those with a chronic condition between counties. It is possible to compare the characteristics of adults with diabetes

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH DIABETES							TOTAL NUMBER	UNINSURED
				LOW-INCOME	WITH MEDI-CAL	IN PAST 12 MOS...			AGES 18-64			
						AGE 65+	ER VISIT	4+ MD VISITS				
Mendocino	68,000	5,000	7.5%	56.9%	27.5%*	30.4%	33.4%	60.9%	4,000	–		
Merced	171,000	13,000	7.5%	60.4%	38.3%	51.6%	25.5%	75.7%	6,000	13.5%*		
Monterey	291,000	24,000	8.4%	47.4%	20.1%*	26.3%	35.1%*	61.9%	18,000	33.8%*		
Napa	96,000	9,000	9.2%	28.3%*	29.0%*	41.6%	28.1%*	63.3%	5,000	15.4%*		
Nevada	80,000	4,000	4.9%	13.4%*	15.0%*	32.1%*	24.1%*	68.0%	3,000	–		
Orange	2,256,000	151,000	6.7%	33.6%	13.7%	34.7%	27.3%	68.4%	99,000	16.2%*		
Placer	238,000	13,000	5.5%	45.3%	10.2%*	62.1%	35.1%	53.3%	5,000	–		
Riverside	1,403,000	110,000	7.8%	39.1%	20.3%	35.6%	27.1%	55.9%	71,000	31.3%		
Sacramento	1,003,000	66,000	6.6%	27.6%	21.3%	38.6%	28.9%	63.6%	41,000	13.0%*		
San Benito	41,000	3,000	7.6%	16.5%*	–	57.9%	30.0%*	84.6%	1,000	–		
San Bernardino	1,382,000	127,000	9.2%	35.1%	18.3%	27.5%	29.1%	52.1%	92,000	11.1%		
San Diego	2,198,000	138,000	6.3%	37.0%	19.5%	37.4%	25.2%	60.3%	86,000	30.2%		
1–North Coastal	367,000	21,000	5.9%	42.2%*	9.3%*	32.3%	29.5%*	48.5%	15,000	40.0%*		
2–North Central	442,000	17,000	3.8%	21.4%*	19.2%*	48.6%	27.4%	52.0%	9,000	11.5%*		
3–Central	370,000	32,000	8.8%	38.0%	30.5%*	30.4%*	26.1%*	74.0%	23,000	48.5%*		
4–South	286,000	24,000	8.3%	47.1%	16.6%*	49.3%	22.9%	52.6%	12,000	24.2%*		
5–East	356,000	21,000	5.8%	31.8%	25.0%	39.9%	27.7%	69.9%	12,000	23.0%*		
6–North Inland	378,000	23,000	6.1%	36.6%	11.7%*	29.3%	18.4%	57.2%	16,000	15.7%*		
San Francisco	674,000	46,000	6.8%	36.1%	20.7%*	40.9%	36.2%	58.6%	27,000	11.2%*		
San Joaquin	443,000	39,000	8.7%	41.9%	17.4%*	39.4%	32.6%	47.6%	23,000	17.6%*		
San Luis Obispo	192,000	8,000	3.9%	23.6%*	–	41.1%	11.7%*	68.6%	4,000	22.9%*		
San Mateo	558,000	42,000	7.6%	15.5%*	21.4%*	32.5%	34.1%	62.2%	28,000	1.9%*		
Santa Barbara	300,000	17,000	5.8%	49.2%	23.8%*	38.2%	19.7%*	67.4%	11,000	13.1%*		
Santa Clara	1,321,000	71,000	5.3%	35.8%	20.9%	33.8%	30.1%	70.1%	47,000	8.0%*		
Santa Cruz	197,000	14,000	7.3%*	57.3%*	42.7%*	15.6%*	48.1%*	82.7%	12,000	19.1%*		
Shasta	136,000	9,000	6.6%	35.4%	25.2%*	26.8%	25.0%	67.6%	7,000	11.7%*		
Solano	298,000	28,000	9.4%	27.5%*	35.9%*	32.5%	49.3%	64.5%	19,000	9.2%*		

to the characteristics of all adults in the same county, however. For example, in LA SPA 4-Metro, 40.2 percent of adults with diabetes who were ages 18 to 64 reported no health insurance (Table 6.1). While this is an extremely high proportion, it is similar to all adults ages 18 to 64 in that SPA who reported no health insurance (41.1 percent, see Table 3.1).

**Racial and ethnic characteristics.** Among California adults reporting diabetes, the racial-ethnic distribution was 32.7 percent Latino, 6.7 percent American Indian/Alaska Native, 10.4 percent Asian, 8.4 percent African American, 40.8 percent White, and 1.0 percent other single/two or more races (see Table 6.2). Latinos had a much higher proportion of adult diabetes in comparison to their total adult population (32.7 percent versus 29.0 percent, see also Table 3.2). Similarly, American Indians/Alaska Natives and African Americans in California were over-represented in the adult population reporting diabetes (6.7 percent versus 4.1 percent, and 8.4 percent versus 5.7 percent, respectively). Programs targeting adults with diabetes need to include outreach to all racial and ethnic minorities in all regions of the state, but adults reporting diabetes were disproportionately Latino in the Sacramento Area counties, the San Joaquin Valley, Central Coast counties, Los Angeles County, and other Southern California counties; disproportionately Asian American in the Northern/Sierra counties; disproportionately

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH DIABETES						
				LOW-INCOME	WITH MEDI-CAL	IN PAST 12 MOS...			AGES 18-64	
						AGE 65+	ER VISIT	4+ MD VISITS	TOTAL NUMBER	UNINSURED
Sonoma	355,000	25,000	7.1%	36.0%	30.1%	41.1%	30.2%	64.4%	15,000	9.2%*
Stanislaus	348,000	27,000	7.7%	40.0%	14.3%*	17.2%	18.6%*	71.1%	22,000	10.5%*
Sutter, Yuba	112,000	10,000	9.0%	44.0%	21.9%	38.5%	32.0%	76.7%	6,000	15.4%*
Tehama, Glenn, Colusa	82,000	8,000	10.0%	59.1%	49.5%	31.0%	35.1%	83.7%	6,000	-
Tulare	288,000	32,000	11.3%	66.5%	37.6%	29.7%	30.7%	68.4%	23,000	24.2%*
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	148,000	15,000	10.1%	43.3%	27.0%*	46.4%	50.0%	80.4%	8,000	7.7%*
Ventura	596,000	57,000	9.5%	39.4%	19.6%*	31.7%	30.8%*	65.6%	39,000	20.0%*
Yolo	139,000	10,000	7.1%	41.6%	21.4%*	30.9%	25.3%*	50.8%	7,000	10.3%*

\*Indicates an unstable estimate.

Dash (-) indicates the sample size is too small to provide an estimate.

Note: Diabetes is defined in the Appendix under "Variables."

Source: 2007 California Health Interview Survey.

**Table 6.2. Adults Diagnosed with Diabetes, by Race/Ethnicity and Region, 2007**

	TOTAL	LATINO	AMERICAN INDIAN/ ALASKA NATIVE	ASIAN	AFRICAN AMERICAN	WHITE	OTHER SINGLE/ TWO OR MORE RACES
<b>California</b>	<b>2,099,000</b>	<b>32.7%</b>	<b>6.7%</b>	<b>10.4%</b>	<b>8.4%</b>	<b>40.8%</b>	<b>1.0%</b>
Northern/Sierra Counties	83,000	8.6%	11.0%	4.5%*	1.0%*	74.0%	0.9%*
Bay Area Counties	367,000	16.8%	7.0%*	20.9%	8.1%	45.5%	1.6%*
Sacramento Area Counties	99,000	17.8%	2.4%*	8.3%	11.1%	60.1%	-
San Joaquin Valley Counties	244,000	41.7%	11.7%	5.0%*	3.5%*	37.9%	0.3%
Central Coast Counties	124,000	43.8%	3.5%*	1.5%*	2.8%*	44.8%	3.6%*
Los Angeles County	642,000	42.2%	7.0%	10.6%	13.2%	26.2%	0.8%*
Other Southern California Counties	540,000	32.2%	4.6%	8.7%	6.8%	46.8%	0.9%*

\*Indicates an unstable estimate.

Dash (-) indicates the sample size is too small to provide an estimate.

Notes: Diabetes and race/ethnicity are defined in the Appendix under "Variables." Totals may not add up to 100 percent due to rounding.

Source: 2007 California Health Interview Survey.

African American in all California regions except for the San Joaquin Valley; and disproportionately American Indian/Alaska Native in the Northern/Sierra counties, Bay Area counties, San Joaquin Valley, Los Angeles County, and other Southern California counties.

## Hypertension

High blood pressure or hypertension is a major risk factor for heart attack, heart failure, stroke, and kidney disease.<sup>17</sup> Hypertension for adults indicates a systolic blood pressure of 140 mmHg or higher or a diastolic blood pressure of 90 mmHg or higher.<sup>18</sup> Although hospitalizations for hypertension are relatively small compared to hospitalizations for heart disease and strokes, early awareness, treatment, and control of blood pressure among those with hypertension are key to prevention and reduction of morbidity and mortality.

**Statewide characteristics.** In 2007, approximately 7 million California adults ages 18 and over (26.1 percent) reported having ever been diagnosed with hypertension (see Table 7.1 on the following page). One-third of California adults reporting hypertension were low-income (31.8 percent), which is similar to the statewide population of low-income California adults at 30.9 percent. There were twice as many adults ages 65 and over reporting hypertension (33.8 percent) than the total older adult population (14.5 percent). Health care coverage

**Table 7.1. Adults Diagnosed with High Blood Pressure/Hypertension, 2007**

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH HYPERTENSION						
				LOW-INCOME	WITH MEDI-CAL	AGE 65+	IN PAST 12 MOS...		AGES 18-64	
							ER VISIT	4+ MD VISITS	TOTAL NUMBER	UNINSURED
<b>California</b>	<b>26,874,000</b>	<b>7,017,000</b>	<b>26.1%</b>	<b>31.8%</b>	<b>17.5%</b>	<b>33.8%</b>	<b>25.6%</b>	<b>50.8%</b>	<b>4,647,000</b>	<b>17.2%</b>
Alameda	1,134,000	324,000	28.6%	34.9%	26.5%	30.2%	25.1%	49.1%	226,000	11.1%
Butte	164,000	46,000	28.3%	32.7%	17.5%	35.9%	19.4%	53.1%	30,000	19.8%
Contra Costa	775,000	194,000	25.0%	13.3%	10.2%	39.3%	23.3%	44.7%	118,000	5.0%*
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	113,000	35,000	31.2%	44.3%	18.0%	42.4%	28.3%	48.2%	20,000	24.3%
El Dorado	137,000	42,000	30.8%	21.4%	10.1%*	36.8%	23.0%	50.7%	27,000	14.3%
Fresno	628,000	179,000	28.4%	39.8%	25.7%	29.5%	21.4%	53.2%	126,000	21.0%
Humboldt	100,000	23,000	23.0%	31.9%	23.4%	42.5%	26.5%	50.0%	13,000	18.1%
Imperial	119,000	34,000	28.9%	52.5%	26.2%	32.8%	19.8%	59.9%	23,000	23.0%
Kern	533,000	145,000	27.3%	41.6%	22.4%	31.0%	28.3%	59.3%	100,000	22.7%
Kings	92,000	22,000	23.5%	44.8%	22.6%	31.8%	29.5%	63.2%	15,000	29.2%
Lake	50,000	19,000	37.3%	37.2%	26.3%	40.5%	26.6%	59.6%	11,000	14.1%*
Los Angeles	7,328,000	1,865,000	25.5%	39.9%	22.7%	34.3%	26.8%	52.3%	1,225,000	20.7%
SPA 1- Antelope Valley	230,000	65,000	28.4%	38.6%	24.7%	31.3%	33.9%	61.1%	45,000	15.2%*
SPA 2- San Fernando	1,522,000	380,000	25.0%	30.2%	16.0%	36.0%	29.9%	50.0%	243,000	17.3%
SPA 3- San Gabriel Valley	1,386,000	354,000	25.6%	34.3%	20.0%	35.5%	23.0%	51.9%	229,000	19.8%
SPA 4- Metro	880,000	194,000	22.1%	58.7%	33.5%	29.9%	28.0%	54.2%	136,000	38.2%
SPA 5- West Area	520,000	133,000	25.5%	21.9%	12.6%*	37.2%	14.5%	49.6%	83,000	11.7%*
SPA 6- South	668,000	194,000	29.0%	70.0%	44.6%	31.3%	38.7%	47.8%	133,000	30.9%
SPA 7- East Area	948,000	247,000	26.1%	40.6%	18.2%	37.7%	22.6%	48.0%	154,000	18.4%
SPA 8- South Bay	1,176,000	297,000	25.3%	34.8%	20.6%	32.3%	26.4%	60.1%	201,000	14.1%
Madera	98,000	28,000	28.3%	34.1%	21.1%	36.4%	29.0%	53.0%	18,000	16.4%

was slightly better than the statewide average for California adults reporting hypertension. Among adults reporting hypertension, 17.5 percent said they were enrolled in Medi-Cal, a higher proportion than the 12.0 percent for all adults statewide. Seventeen percent of adults with hypertension (ages 18 to 64) reported being uninsured at some point in the past year, compared to 23.8 percent of all California adults (ages 18 to 64). Health care utilization was substantially higher among California adults reporting hypertension compared to all California adults. One in two adults reporting hypertension saw a doctor at least four times in the past year (50.8 percent), but only one-quarter went to the ER in the past year (25.6 percent).

**County prevalence.** The prevalence of hypertension ranged from 19.9 percent in Marin County to 37.3 percent in Lake County. In addition to Marin County, the California areas with the lowest prevalence of hypertension included San Diego North Inland region (23.0 percent), Los Angeles SPA 5-West (25.5 percent), and Monterey County (21.3 percent). The areas with the highest prevalence of hypertension included Stanislaus County (32.6 percent), Sutter/Yuba counties (32.9 percent), the Tuolumne/Calaveras/Amador/Inyo/Mariposa/Mono/Alpine County cluster (34.2 percent), Mendocino County (37.1 percent), and Lake County (37.3 percent).



	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH HYPERTENSION						
				LOW-INCOME	WITH MEDI-CAL	AGE 65+	IN PAST 12 MOS...		AGES 18-64	
							ER VISIT	4+ MD VISITS	TOTAL NUMBER	UNINSURED
Marin	189,000	38,000	19.9%	11.4%	6.5%	48.0%	22.2%	43.9%	20,000	6.7%*
Mendocino	68,000	25,000	37.1%	37.2%	11.8%	32.8%	19.8%	37.8%	17,000	28.7%*
Merced	171,000	39,000	22.7%	41.1%	24.2%	29.6%	28.2%	62.5%	27,000	26.2%
Monterey	291,000	76,000	26.1%	31.1%	16.4%	30.0%	30.7%	42.8%	53,000	20.0%*
Napa	96,000	28,000	29.0%	16.0%	10.1%*	35.9%	26.4%	55.2%	18,000	10.7%*
Nevada	80,000	21,000	26.8%	18.7%	7.3%	45.8%	28.7%	53.6%	12,000	14.0%
Orange	2,256,000	489,000	21.7%	24.8%	12.6%	38.8%	19.2%	58.2%	299,000	12.1%
Placer	238,000	56,000	23.5%	15.3%	6.8%*	45.1%	18.1%	47.4%	31,000	2.0%*
Riverside	1,403,000	380,000	27.1%	32.2%	12.7%	33.9%	24.9%	50.5%	251,000	18.1%
Sacramento	1,003,000	307,000	30.7%	31.5%	20.8%	30.5%	25.5%	47.5%	214,000	8.0%
San Benito	41,000	9,000	22.1%	19.1%	11.7%*	43.4%	22.7%	59.1%	5,000	11.1%*
San Bernardino	1,382,000	386,000	27.9%	36.9%	17.2%	26.8%	31.8%	45.1%	282,000	19.4%
San Diego	2,198,000	571,000	26.0%	24.6%	11.3%	32.3%	26.3%	46.5%	387,000	20.6%
1-North Coastal	367,000	86,000	23.6%	21.8%	9.2%	38.1%	26.3%	51.9%	54,000	16.6%*
2-North Central	442,000	109,000	24.6%	15.0%	6.6%*	28.7%	25.5%	42.4%	77,000	19.2%*
3-Central	370,000	104,000	28.0%	37.1%	16.8%	26.5%	25.5%	41.5%	76,000	35.2%*
4-South	286,000	81,000	28.2%	28.8%	13.3%	36.6%	26.0%	49.8%	51,000	16.7%*
5-East	356,000	105,000	29.5%	22.7%	11.7%	31.6%	27.1%	47.9%	72,000	16.9%
6-North Inland	378,000	87,000	23.0%	22.6%	10.5%*	35.0%	27.6%	47.6%	57,000	14.8%*
San Francisco	674,000	154,000	22.8%	25.8%	16.5%	39.8%	23.4%	46.7%	93,000	4.2%*
San Joaquin	443,000	125,000	28.3%	26.3%	10.9%	34.7%	20.9%	45.0%	82,000	16.0%
San Luis Obispo	192,000	46,000	23.7%	14.3%	6.0%*	43.5%	21.3%	49.7%	26,000	20.5%
San Mateo	558,000	148,000	26.5%	22.1%	8.9%	35.2%	22.4%	50.1%	96,000	15.2%*
Santa Barbara	300,000	67,000	22.4%	33.1%	15.6%	43.5%	21.3%	52.0%	38,000	15.5%*
Santa Clara	1,321,000	333,000	25.2%	23.5%	12.9%	32.4%	26.4%	46.6%	225,000	12.6%
Santa Cruz	197,000	48,000	24.4%	28.1%	21.0%*	26.7%	33.2%	53.6%	35,000	9.8%*
Shasta	136,000	43,000	32.0%	29.3%	15.2%	40.1%	25.2%	54.4%	26,000	19.6%

**County characteristics.** The characteristics of county residents with a chronic condition are determined in part by the characteristics of all county residents, so it is not possible to compare the characteristics of those with a chronic condition between counties. It is possible to compare the characteristics of adults with hypertension to the characteristics of all adults in the same county, however. For example, in Sacramento County, 20.8 percent of adults with hypertension reported having Medi-Cal coverage (Table 7.1), a proportion higher than that for all Sacramento County adults (12.9 percent, see Table 3.1).

**Racial and ethnic characteristics.** Among California adults reporting hypertension, the racial-ethnic distribution was 22.1 percent Latino, 4.9 percent American Indian/Alaska Native, 11.7 percent Asian, 8.3 percent African American, 51.8 percent White, and 1.3 percent other single/two or more races (Table 7.2). Compared to their total adult population in California, African Americans had a higher proportion of adults reporting having been diagnosed with hypertension (5.7 percent versus 8.3 percent, see also Table 3.2). Similarly, Whites were over-represented in the adult population reporting hypertension (47.5 percent versus 51.8 percent). Programs targeting adults with hypertension need to include outreach to all racial and ethnic minorities in all regions of the state, but adults reporting hypertension were disproportionately Asian

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH HYPERTENSION						
				LOW-INCOME	WITH MEDI-CAL	AGE 65+	IN PAST 12 MOS...		AGES 18-64	
							ER VISIT	4+ MD VISITS	TOTAL NUMBER	UNINSURED
Solano	298,000	89,000	29.9%	18.8%	17.8%	28.1%	36.7%	56.9%	64,000	12.2% *
Sonoma	355,000	84,000	23.8%	21.3%	13.2% *	40.2%	26.0%	55.9%	50,000	13.7% *
Stanislaus	348,000	113,000	32.6%	40.0%	13.4%	27.0%	28.9%	49.4%	83,000	24.6%
Sutter, Yuba	112,000	37,000	32.9%	40.4%	24.7%	31.5%	35.0%	61.0%	25,000	19.8%
Tehama, Glenn, Colusa	82,000	25,000	31.2%	46.2%	23.6%	31.7%	34.4%	60.6%	17,000	14.2% *
Tulare	288,000	79,000	27.3%	44.4%	21.4%	26.5%	18.6%	57.1%	58,000	30.9%
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	148,000	51,000	34.2%	24.2%	13.2%	44.2%	30.2%	51.7%	28,000	9.9% *
Ventura	596,000	161,000	27.0%	21.5%	14.4% *	30.1%	21.3%	51.0%	113,000	19.6% *
Yolo	139,000	31,000	22.1%	20.0%	10.1%	32.2%	16.9%	44.1%	21,000	33.6%

\*Indicates an unstable estimate.

Dash (-) indicates the sample size is too small to provide an estimate.

Note: Hypertension is defined in the Appendix under "Variables."

Source: 2007 California Health Interview Survey.

**Table 7.2. Adults Diagnosed with High Blood Pressure/Hypertension, by Race/Ethnicity and Region, 2007**

	TOTAL	LATINO	AMERICAN INDIAN/ ALASKA NATIVE	ASIAN	AFRICAN AMERICAN	WHITE	OTHER SINGLE/ TWO OR MORE RACES
<b>California</b>	<b>7,017,000</b>	<b>22.1%</b>	<b>4.9%</b>	<b>11.7%</b>	<b>8.3%</b>	<b>51.8%</b>	<b>1.3%</b>
Northern/Sierra Counties	326,000	6.6%	7.7%	2.6%	0.7%	81.4%	1.0% *
Bay Area Counties	1,392,000	12.8%	4.8%	21.1%	8.3%	50.9%	2.1%
Sacramento Area Counties	436,000	10.0%	4.3%	10.8%	8.5%	65.0%	1.6% *
San Joaquin Valley Counties	730,000	27.0%	7.1%	4.2%	5.6%	55.6%	0.6% *
Central Coast Counties	407,000	23.0%	5.8% *	6.1%	1.5% *	62.4%	1.7% *
Los Angeles County	1,865,000	32.0%	4.5%	12.9%	14.4%	35.7%	1.0%
Other Southern California Counties	1,860,000	23.0%	4.1%	9.4%	5.9%	56.5%	1.0% *

\*Indicates an unstable estimate.

Notes: Hypertension and race/ethnicity are defined in the Appendix under "Variables." Totals may not add up to 100 percent due to rounding.

Source: 2007 California Health Interview Survey.

American in the Northern/Sierra Area counties, Sacramento Area counties, and Central Coast counties, disproportionately African American in the Bay Area counties, the Sacramento Area counties, San Joaquin Valley, Los Angeles County, and other Southern California counties, and disproportionately American Indian/Alaska Native in all California regions except for the Sacramento Area counties.

### Psychological Distress

Mental health is an essential component of overall health and well-being. About six percent of adults in the United States have a serious mental illness.<sup>19</sup> Psychological distress is a mental health problem that can "cause moderate to serious impairment in social, occupational, or school functioning and... require(s) treatment."<sup>20</sup> Psychological distress is associated with co-occurring chronic health conditions, disability, and premature death.<sup>21,22</sup> If left untreated, adults experiencing psychological distress are at-risk for preventable hospitalizations.

**Statewide characteristics.** In 2007, about 1 million California adults ages 18 and over (3.8 percent) reported experiencing psychological distress in the past month (see Table 8.1 on the next page). Nine percent of those reporting psychological distress were ages 65 and over, which was smaller than the total older adult population in California (14.5 percent). Compared to the total California adult population who were low-income at 30.9 percent, more than half of California

**Table 8.1. Adults with Likely Psychological Distress in the Past Month, 2007**

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH LIKELY PSYCHOLOGICAL DISTRESS							TOTAL NUMBER	UNINSURED
				LOW-INCOME	WITH MEDI-CAL	AGE 65+	IN PAST 12 MOS...		AGES 18-64			
							ER VISIT	4+ MD VISITS	ER VISIT	4+ MD VISITS		
<b>California</b>	<b>26,769,000</b>	<b>1,007,000</b>	<b>3.8%</b>	<b>55.5%</b>	<b>33.6%</b>	<b>8.7%</b>	<b>40.1%</b>	<b>55.6%</b>	<b>920,000</b>	<b>30.8%</b>		
Alameda	1,129,000	26,000	2.3%	34.2% *	17.0% *	2.9% *	47.7%	60.2%	26,000	14.1% *		
Butte	161,000	5,000	3.0% *	83.7%	76.9%	–	38.3% *	80.5%	4,000	16.7% *		
Contra Costa	771,000	20,000	2.6% *	20.0% *	67.2% *	2.8% *	67.1% *	88.9%	20,000	11.9% *		
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	113,000	6,000	5.6%	71.6%	55.0%	–	61.2%	86.4%	6,000	28.9% *		
El Dorado	137,000	5,000	3.5%	30.6% *	16.3% *	17.7% *	28.3% *	55.4%	4,000	43.2% *		
Fresno	625,000	27,000	4.3% *	37.5% *	33.4% *	11.8% *	28.7% *	43.4% *	24,000	49.7% *		
Humboldt	99,000	5,000	5.5% *	80.3%	77.1%	–	78.4%	84.3%	5,000	12.2% *		
Imperial	118,000	4,000	3.4% *	72.0%	70.8%	31.5% *	29.0% *	54.3%	3,000	32.4% *		
Kern	531,000	20,000	3.8%	73.7%	58.0%	13.3% *	44.8%	61.2%	17,000	33.3% *		
Kings	92,000	5,000	5.3%	62.9%	40.2%	–	45.5%	46.9%	5,000	19.3% *		
Lake	50,000	3,000	6.2%	71.9%	51.2%	–	39.4%	68.2%	3,000	28.2% *		
Los Angeles	7,303,000	278,000	3.8%	63.0%	33.5%	8.1%	30.6%	53.1%	255,000	38.2%		
SPA 1–Antelope Valley	228,000	11,000	4.8%	56.2%	49.1%	–	31.6%	78.2%	11,000	29.9% *		
SPA 2–San Fernando	1,515,000	45,000	2.9%	34.5%	19.3%	6.1% *	30.7%	58.7%	42,000	28.4%		
SPA 3–San Gabriel Valley	1,383,000	49,000	3.5%	49.6%	26.9% *	13.0% *	31.9%	71.4%	42,000	31.6% *		
SPA 4–Metro	879,000	41,000	4.6%	75.7%	42.0%	6.9%	31.9%	42.6%	38,000	40.6%		
SPA 5–West Area	520,000	6,000	1.1% *	43.8% *	17.0% *	28.8% *	–	32.6% *	4,000	–		
SPA 6–South	665,000	47,000	7.0%	84.9%	40.7% *	6.7% *	22.7% *	40.6% *	44,000	51.3%		
SPA 7–East Area	943,000	47,000	5.0%	66.4%	37.1%	5.6% *	34.3%	40.7%	44,000	46.1%		
SPA 8–South Bay	1,170,000	34,000	2.9%	74.5%	34.4% *	8.5% *	36.0% *	61.9%	31,000	34.6% *		
Madera	97,000	5,000	5.2%	44.4%	24.6% *	–	41.2%	52.0%	5,000	35.5% *		
Marin	189,000	5,000	2.5% *	25.3% *	12.4% *	–	26.5% *	57.6% *	4,000	12.1% *		

adults reporting psychological distress were low-income (55.5 percent). Among adults (ages 18 to 64) reporting psychological distress, 30.8 percent reported being uninsured in the past year, which was higher than the 23.8 percent for this age group statewide. Thirty-four percent of adults with psychological distress had Medi-Cal coverage, compared to 12.0 percent of all California adults. Health care utilization was much higher for adults reporting psychological distress compared to all adults. Fifty-six percent of adults reporting psychological distress saw a doctor at least four times in the past year (compared to 33.1 percent of all California adults) and 40.1 percent went to the ER in the past year (compared to 18.8 percent of all California adults).

**County prevalence.** Sonoma County had the lowest prevalence of psychological distress at 1.0 percent while the Tehama/Glenn/Colusa County cluster had the highest prevalence at 8.7 percent. In addition to Sonoma County, the California areas with the lowest prevalence of psychological distress included Los Angeles SPA 5-West (1.1 percent), Placer County (1.7 percent), and San Diego North Central region (1.8 percent). The areas with the highest prevalence of psychological distress included Lake County (6.2 percent), Los Angeles SPA 6-South (7.0 percent), Sutter/Yuba counties (7.6 percent), and the Tehama/Glenn/Colusa County cluster (8.7 percent).

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH LIKELY PSYCHOLOGICAL DISTRESS							TOTAL NUMBER	UNINSURED
				LOW-INCOME	WITH MEDI-CAL	IN PAST 12 MOS...			AGES 18-64			
						AGE 65+	ER VISIT	4+ MD VISITS	TOTAL NUMBER	UNINSURED		
Mendocino	68,000	2,000	3.4%	79.2%	54.5%	–	76.4%	76.0%	2,000	–		
Merced	171,000	6,000	3.8%	71.5%	60.4%	–	34.2%	75.4%	6,000	21.6%*		
Monterey	291,000	10,000	3.3%	68.3%	42.7%*	6.1%*	25.7%*	42.4%*	9,000	35.0%*		
Napa	96,000	2,000	2.3%	53.3%	55.8%	–	29.6%*	61.6%	2,000	–		
Nevada	79,000	2,000	3.1%	39.7%*	34.9%*	–	46.9%	76.6%	2,000	40.0%*		
Orange	2,247,000	88,000	3.9%	49.6%	25.2%	7.8%*	49.4%	45.9%	81,000	46.7%		
Placer	236,000	4,000	1.7%*	59.0%*	22.6%*	–	20.0%*	58.1%*	4,000	–		
Riverside	1,398,000	64,000	4.6%	53.7%	23.5%*	6.3%*	21.0%*	66.1%	60,000	26.1%*		
Sacramento	1,001,000	56,000	5.6%	64.8%	47.3%	11.8%*	53.2%	80.3%	50,000	15.6%*		
San Benito	40,000	1,000	2.3%*	–	–	–	56.6%*	–	1,000	–		
San Bernardino	1,379,000	55,000	4.0%	50.9%	27.2%	8.8%*	53.0%	67.9%	50,000	13.1%*		
San Diego	2,188,000	73,000	3.3%	53.8%	29.5%*	7.9%	35.5%	58.2%	67,000	27.0%		
1–North Coastal	365,000	13,000	3.6%*	42.1%*	8.2%*	–	52.1%	48.3%*	13,000	53.3%*		
2–North Central	442,000	8,000	1.8%*	18.1%*	–	9.6%*	29.7%*	38.5%*	7,000	–		
3–Central	365,000	16,000	4.4%	78.2%	31.8%*	–	50.7%	57.0%	16,000	15.6%*		
4–South	285,000	10,000	3.5%*	34.9%	22.4%	23.8%*	23.4%	54.7%	8,000	52.4%		
5–East	354,000	17,000	4.7%*	80.0%	68.6%	11.5%*	21.2%*	83.8%	15,000	15.7%*		
6–North Inland	378,000	9,000	2.4%	31.1%	13.0%*	–	29.4%*	48.6%	9,000	23.8%*		
San Francisco	673,000	20,000	3.0%*	40.2%*	31.3%*	20.2%*	78.0%	74.6%	16,000	7.6%*		
San Joaquin	441,000	12,000	2.6%*	63.7%	21.3%*	48.4%*	78.3%	45.9%*	6,000	21.4%*		
San Luis Obispo	192,000	6,000	3.1%*	66.4%	14.6%*	13.2%*	49.5%*	45.9%*	5,000	39.3%*		
San Mateo	554,000	21,000	3.8%*	3.5%*	–	2.7%*	3.7%*	36.9%*	21,000	8.8%*		
Santa Barbara	300,000	15,000	5.2%	82.4%	58.5%	3.5%*	39.6%*	47.9%	15,000	27.3%*		
Santa Clara	1,317,000	39,000	2.9%	55.9%	19.4%*	3.9%*	50.3%	63.9%	37,000	39.7%*		
Santa Cruz	197,000	5,000	2.6%*	82.3%	34.4%*	–	44.4%*	64.5%	5,000	37.6%*		
Shasta	136,000	5,000	3.3%	37.0%	18.4%*	–	54.2%	46.5%	4,000	35.2%*		
Solano	297,000	16,000	5.5%*	39.1%*	74.8%	–	48.5%*	85.2%	16,000	5.8%*		

**County characteristics.** The characteristics of county residents with a chronic condition are determined in part by the characteristics of all county residents, so it is not possible to compare the characteristics of those with a chronic condition between counties. It is possible to compare the characteristics of adults with psychological distress to the characteristics of all adults in the same county, however. For example, in Alameda County, 47.7 percent of adults with psychological distress used the ER in the past year (Table 8.1), which is over twice as often as all Alameda County adults report ER use (20.6 percent, Table 3.1). Note that due to the relatively low number of adults with psychological distress in many counties, the estimates of many of their characteristics are not statistically stable (indicated by an asterisk) and should be considered “ballpark” estimates.

**Racial and ethnic characteristics.** Among California adults reporting psychological distress, the racial-ethnic distribution was 34.6 percent Latino, 8.5 percent American Indian/Alaska Native, 9.1 percent Asian, 8.4 percent African American, 38.5 percent White, and 0.9 percent other single/two or more races (see Table 8.2). Latinos had a much higher proportion of adult psychological distress in comparison to their total adult population (34.6 percent versus 29.0 percent, see also Table 3.2). Similarly, American Indians/Alaska Natives and African Americans in California were over-represented in the adult population

	TOTAL ADULT POPULATION	NUMBER	PERCENT	AMONG ADULTS WITH LIKELY PSYCHOLOGICAL DISTRESS						
				IN PAST 12 MOS...				AGES 18-64		
				LOW-INCOME	WITH MEDI-CAL	AGE 65+	ER VISIT	4+ MD VISITS	TOTAL NUMBER	UNINSURED
Sonoma	353,000	4,000	1.0% *	29.6% *	-	-	29.7% *	86.3%	3,000	36.2% *
Stanislaus	345,000	14,000	4.2%	71.2%	46.4%	21.8% *	35.4%	67.8%	11,000	44.6% *
Sutter, Yuba	112,000	9,000	7.6%	75.7%	65.7%	-	57.8%	61.6%	8,000	28.8% *
Tehama, Glenn, Colusa	80,000	7,000	8.7%	60.8%	63.6%	-	44.9%	77.4%	7,000	23.3% *
Tulare	286,000	15,000	5.2%	40.3%	30.4% *	8.6% *	31.5% *	61.3%	14,000	33.1% *
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	146,000	6,000	4.4%	46.4%	43.3% *	11.2% *	46.6%	69.1%	6,000	43.8% *
Ventura	596,000	31,000	5.2% *	69.4%	19.3% *	8.4% *	50.6% *	87.5%	28,000	47.5% *
Yolo	139,000	3,000	2.4% *	31.2% *	36.6% *	25.2% *	30.1% *	71.7%	2,000	-

\*Indicates an unstable estimate. Dash (-) indicates the sample size is too small to provide an estimate.

Notes: Psychological distress is defined in the Appendix under "Variables." The data are unadjusted to the California population. Total population is 97,000 less than other variables because psychological distress was not asked of those unable to personally respond to the survey due to illness even though other more objective questions were asked of a proxy (knowledgeable adult) in those cases.

Source: 2007 California Health Interview Survey.

reporting psychological distress (8.5 percent versus 4.1 percent, and 8.4 percent versus 5.7 percent, respectively). Programs targeting adults with psychological distress need to include outreach to all racial and ethnic minorities in all regions of the state, but adults reporting psychological distress were disproportionately Latino in Bay Area counties, San Joaquin Valley, Central Coast counties, Los Angeles County, and the other Southern California counties, disproportionately Asian American in the Central Coast counties, disproportionately American Indian/Alaska Native in all California regions, and disproportionately African American in all California regions except for the Northern/Sierra counties.

**Table 8.2. Adults with Likely Psychological Distress in the Past Month, by Race/Ethnicity and Region, 2007**

	TOTAL	LATINO	AMERICAN INDIAN/ ALASKA NATIVE	ASIAN	AFRICAN AMERICAN	WHITE	OTHER SINGLE/ TWO OR MORE RACES
<b>California</b>	<b>1,007,000</b>	<b>34.6%</b>	<b>8.5%</b>	<b>9.1%</b>	<b>8.4%</b>	<b>38.5%</b>	<b>0.9%</b>
Northern/Sierra Counties	51,000	7.5% *	15.0%	2.4% *	-	74.9%	-
Bay Area Counties	153,000	27.1%	11.3% *	20.6% *	8.1% *	31.4%	1.5% *
Sacramento Area Counties	68,000	10.2% *	8.5% *	5.3% *	20.3% *	55.5%	-
San Joaquin Valley Counties	104,000	44.8%	10.2% *	3.0% *	4.2% *	37.6%	-
Central Coast Counties	68,000	44.3%	10.7% *	9.2% *	2.3% *	30.5%	3.1% *
Los Angeles County	278,000	44.7%	6.7% *	8.6% *	10.8%	28.6%	0.7% *
Other Southern California Counties	284,000	33.4%	6.7%	7.8%	7.8% *	43.8%	0.6% *

\*Indicates an unstable estimate. Dash (-) indicates the sample size is too small to provide an estimate.

Notes: Psychological distress and race/ethnicity are defined in the Appendix under "Variables." The data are unadjusted to the California population. Totals may not add up to 100 percent due to rounding.

Source: 2007 California Health Interview Survey.

### III. Child Chronic Conditions Prevalence and Characteristics

THE PERCENTAGE OF CHILDREN AND ADOLESCENTS WITH A chronic illness in the United States jumped from 1.8 percent in the 1960s to more than 7 percent in 2004.<sup>23</sup> With the growing impact of chronic conditions upon children, this chapter highlights the prevalence of active asthma, and as a measure of overall health, the prevalence of fair-to-poor health status among children under the age of 18. The prevalence rate is comparable between counties (or by county cluster and sub-county areas). Additional details on the characteristics of children living with each specific chronic condition are provided, including demographic characteristics (e.g., low-income), health care coverage (e.g., uninsured or enrolled in Medi-Cal), and frequent health

care utilization (e.g., average doctor visits or ER visit in the past year). Since these additional details focus only on children reporting a chronic condition by county (or by county cluster and sub-county areas), these numbers should not be compared between counties and should only be examined within the county-context. Additionally, demographic characteristics and frequent health care utilization data for the total child and adolescent population are presented (with and without chronic conditions). These total population data are useful in that they can be used to compare demographic characteristics and health care utilization within the county-context for child chronic conditions data (see Tables 9.1 and 9.2).

**Table 9.1. Total Child Population Ages 0 to 17, by Demographic, 2007**

	TOTAL CHILDREN	LOW-INCOME	WITH MEDI-CAL	UNINSURED	IN PAST 12 MONTHS	
					ER VISIT	3 OR MORE MD VISITS <sup>1</sup>
<b>California</b>	<b>9,912,000</b>	<b>40.6%</b>	<b>25.8%</b>	<b>9.4%</b>	<b>18.6%</b>	<b>39.0%</b>
Alameda	363,000	25.7%	16.9%	3.8%	20.4%	40.6%
Butte	47,000	40.9%	22.9%	5.4% *	25.2%	43.1%
Contra Costa	255,000	23.7%	9.9%	6.2% *	19.0%	37.9%
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	32,000	48.1%	28.9%	8.6% *	36.2%	51.3%
El Dorado	40,000	22.5%	9.7%	9.2%	16.0%	38.8%
Fresno	270,000	48.4%	40.8%	9.2%	18.8%	38.3%
Humboldt	28,000	45.5%	29.0%	16.1%	17.1%	33.5%
Imperial	47,000	70.2%	44.3%	17.4%	28.4%	52.0%
Kern	243,000	52.3%	40.1%	9.0% *	17.8%	39.1%
Kings	43,000	60.5%	37.2%	13.6%	29.9%	36.7%
Lake	13,000	48.3%	26.5%	11.6% *	25.2%	39.1%

	TOTAL CHILDREN	LOW-INCOME	WITH MEDI-CAL	UNINSURED	IN PAST 12 MONTHS	
					ER VISIT	3 OR MORE MD VISITS <sup>1</sup>
Los Angeles		49.0%	32.3%	10.1%	16.8%	39.6%
SPA 1 –Antelope Valley	95,000	46.3%	33.7%	10.4%	22.6%	39.8%
SPA 2 –San Fernando	582,000	35.1%	23.3%	9.3%	18.6%	38.6%
SPA 3 –San Gabriel Valley	459,000	43.3%	27.7%	11.4%	15.8%	37.3%
SPA 4 –Metro	329,000	64.3%	45.4%	8.2%	19.5%	42.6%
SPA 5 –West Area	129,000	31.9%	16.9%	16.5%	21.7%	39.9%
SPA 6 –South	351,000	82.5%	57.6%	7.7% *	13.4%	34.7%
SPA 7 –East Area	432,000	49.8%	32.7%	9.6%	13.1%	46.2%
SPA 8 –South Bay	440,000	40.0%	23.0%	11.8%	17.4%	38.4%
Madera	42,000	65.8%	43.2%	10.0%	20.2%	49.2%
Marin	54,000	23.3%	10.4% *	5.3% *	20.0%	39.7%
Mendocino	20,000	54.8%	27.9%	8.7% *	17.3%	38.6%
Merced	78,000	64.8%	40.0%	9.6%	17.1%	41.4%

	TOTAL CHILDREN	LOW-INCOME	WITH MEDI-CAL	IN PAST 12 MONTHS		
				UNINSURED	ER VISIT	3 OR MORE MD VISITS <sup>†</sup>
Monterey	120,000	61.3%	37.1%	9.5%*	14.9%	38.3%
Napa	33,000	29.3%	12.6%	9.9%*	21.0%	27.8%
Nevada	19,000	26.5%	7.5%*	16.7%	28.5%	39.1%
Orange	792,000	36.1%	23.7%	8.2%	17.4%	41.3%
Placer	82,000	13.4%	2.8%*	9.2%	13.5%	34.0%
Riverside	582,000	39.8%	22.3%	14.6%	23.9%	40.4%
Sacramento	377,000	34.4%	20.3%	6.3%	19.2%	30.3%
San Benito	17,000	41.5%	16.6%	7.5%	18.9%	39.0%
San Bernardino	595,000	48.2%	28.4%	12.1%	22.4%	34.7%
San Diego	801,000	31.9%	17.4%	8.8%	17.5%	39.5%
1–North Coastal	130,000	29.3%	10.8%	13.2%	15.2%	42.9%
2–North Central	133,000	20.8%	13.5%	3.1%*	20.2%	40.6%
3–Central	130,000	55.8%	31.1%	11.7%	22.4%	40.2%
4–South	120,000	32.2%	22.6%	8.8%	13.5%	35.5%
5–East	124,000	37.7%	17.3%	10.3%	16.6%	43.0%
6–North Inland	163,000	19.2%	11.2%	6.3%	16.9%	35.8%
San Francisco	115,000	26.9%	14.2%	6.7%*	16.7%	41.9%
San Joaquin	220,000	44.2%	31.2%	10.6%	14.2%	34.5%
San Luis Obispo	53,000	27.5%	15.1%	6.8%*	15.4%	43.6%

	TOTAL CHILDREN	LOW-INCOME	WITH MEDI-CAL	IN PAST 12 MONTHS		
				UNINSURED	ER VISIT	3 OR MORE MD VISITS <sup>†</sup>
San Mateo	164,000	15.9%	11.1%	2.3%*	16.6%	36.5%
Santa Barbara	105,000	39.9%	29.5%	9.3%*	13.4%	39.0%
Santa Clara	454,000	25.2%	15.5%	6.9%	19.0%	41.5%
Santa Cruz	58,000	29.0%	33.0%	3.4%*	20.7%	38.6%
Shasta	42,000	53.2%	26.3%	23.7%	19.7%	31.7%
Solano	108,000	33.9%	21.3%	8.0%*	20.8%	42.8%
Sonoma	115,000	30.3%	19.3%	11.5%*	16.0%	37.0%
Stanislaus	164,000	42.5%	24.8%	12.1%	15.5%	37.6%
Sutter, Yuba	49,000	48.1%	30.8%	7.6%	20.4%	44.0%
Tehama, Glenn, Colusa	29,000	59.5%	43.5%	10.1%*	20.8%	44.5%
Tulare	133,000	55.5%	42.3%	9.1%	18.0%	38.0%
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	34,000	34.5%	18.0%*	22.2%*	18.8%	37.4%
Ventura	214,000	31.4%	17.8%	9.9%	18.2%	38.3%
Yolo	46,000	30.5%	13.7%	5.6%*	19.4%	44.9%

\*Indicates an unstable estimate.

†For children ages 2 to 17, calculations reflect an average of three or more doctor visits; for children ages 0 to 1, calculations reflect an average of four or more doctor visits.

Dash (–) indicates the sample size is too small to provide an estimate.

Source: 2007 California Health Interview Survey.

**Total population characteristics.** In 2007, there were an estimated 9.9 million children under the age of 18 living in California (see Table 9.1). Among California children, 40.6 percent were from low-income families. Nine percent of children reported being uninsured at some point in the past year and twenty-six percent of children reported having Medi-Cal coverage. Thirty-nine percent of children saw a doctor at least three times in the past year, and 18.6 percent went to the ER in the past year. The diversity of children living in California is reflected in the racial and ethnic makeup of the state. Across California, the child and adolescent population was 44.5 percent Latino, 5.2 percent American Indian/Alaska Natives, 9.6 percent Asian, 5.9 percent African American, 31.4 percent White, and 3.4 percent other single /two or more races (Table 9.2).

### Active Asthma

Asthma is the leading chronic condition for children under the age of 18. In 2007, the lifetime asthma prevalence for California children was 15.4 percent.<sup>24</sup> Since children have smaller airways than adults, asthma can cause serious health problems. Some children who have been diagnosed with asthma may experience little-to-no symptoms while others may experience more frequent symptoms. For children under the age of 15, asthma is the third leading cause of hospitalization and a common cause for missing school.<sup>25</sup> By identifying children with current or active asthma

**Table 9.2. Total Child Population Ages 0 to 17, by Race/Ethnicity and Region, 2007**

	TOTAL CHILD POPULATION	LATINO	AMERICAN INDIAN/ ALASKA NATIVE	ASIAN	AFRICAN AMERICAN	WHITE	OTHER SINGLE/ TWO OR MORE RACES
<b>California</b>	<b>9,912,000</b>	<b>44.5%</b>	<b>5.2%</b>	<b>9.6%</b>	<b>5.9%</b>	<b>31.4%</b>	<b>3.4%</b>
Northern/Sierra Counties	312,000	18.9%	8.8%	3.0%	1.2% *	66.3%	1.8%
Bay Area Counties	1,663,000	29.7%	3.5%	20.2%	6.1%	34.5%	6.0%
Sacramento Area Counties	545,000	23.7%	4.5%	11.1%	7.3%	48.6%	4.8%
San Joaquin Valley Counties	1,192,000	51.6%	7.0%	5.0%	5.4%	29.5%	1.5%
Central Coast Counties	567,000	50.8%	4.6%	3.3%	0.9% *	36.6%	3.8%
Los Angeles County	2,815,000	57.1%	5.7%	8.9%	7.8%	18.0%	2.7%
Other Southern California Counties	2,817,000	43.5%	4.8%	7.6%	5.5%	35.4%	3.3%

\*Indicates an unstable estimate.

Notes: Race/Ethnicity is defined in the Appendix under "Variables." Totals may not add up to 100 percent due to rounding.

Source: 2007 California Health Interview Survey.



symptoms in the past year, a better understanding of demographic characteristics, frequent health care utilization, and barriers to care among children living with active asthma can be gained.

**Statewide characteristics.** In 2007, an estimated 979,000 California children ages 1 to 17 (10.4 percent) had active asthma in the past year (see Table 10.1). Almost 44.5 percent of children reporting active asthma were from low-income families, which is similar to the statewide percentage of California children from low-income families (40.6 percent). Health care coverage was similar to the statewide average for California children reporting active asthma. Among children reporting active asthma, 29.7 percent reported having Medi-Cal coverage, compared to 25.8 percent of all California children. Nine percent of children with active asthma reported being uninsured at some point in the past year, which is the same as the percentage of all children statewide. Health care utilization was substantially higher among children reporting active asthma compared to all children in California. Fifty-six percent of children reporting active asthma saw a doctor at least three times in the past year, and 33.2 percent went to the ER.

**County prevalence.** The San Diego North Inland region had the lowest prevalence of child active asthma at 4.7 percent, while the Del Norte/Siskiyou/Lassen/Trinity/Modoc/Plumas/Sierra County cluster had the highest prevalence at 15.9 percent. In addition to the San Diego

**Table 10.1. Children Ages 1 to 17 with Active Asthma, 2007**

	TOTAL CHILDREN	NUMBER	PERCENT	AMONG CHILDREN WITH ACTIVE ASTHMA IN PAST 12 MONTHS...				
				LOW-INCOME	WITH MEDI-CAL	UNINSURED	ER VISIT	3 OR MORE MD VISITS
<b>California</b>	<b>9,392,000</b>	<b>979,000</b>	<b>10.4%</b>	<b>44.5%</b>	<b>29.7%</b>	<b>9.1%</b>	<b>33.2%</b>	<b>55.6%</b>
Alameda	342,000	49,000	14.4%	39.1%	31.1%*	1.4%*	34.2%	41.4%
Butte	45,000	3,000	6.8%*	34.0%*	43.0%*	17.7%*	–	63.5%
Contra Costa	242,000	37,000	15.2%	48.7%	25.3%*	7.4%*	39.6%*	56.9%
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	30,000	5,000	15.9%*	48.6%*	45.9%*	–	45.5%*	47.6%*
El Dorado	38,000	3,000	8.2%	–	–	–	28.2%*	36.0%*
Fresno	250,000	33,000	13.1%	52.3%	50.8%	11.7%*	30.7%*	75.8%
Humboldt	26,000	2,000	7.5%	42.1%*	33.7%*	–	41.3%*	67.6%
Imperial	44,000	4,000	10.2%	71.2%	39.1%	18.1%*	40.3%	80.9%
Kern	230,000	34,000	14.8%	40.3%	18.2%*	5.7%*	32.7%*	61.9%
Kings	41,000	6,000	15.7%	43.8%	24.2%*	15.0%*	32.5%*	66.5%
Lake	12,000	1,000	11.9%	73.8%	50.4%	–	41.3%*	53.2%
Los Angeles	2,664,000	289,000	10.9%	53.0%	33.9%	10.7%	33.5%	54.8%
SPA 1–Antelope Valley	90,000	11,000	11.8%	55.1%	38.7%*	–	43.2%*	75.8%
SPA 2–San Fernando	550,000	47,000	8.6%	50.7%	23.2%*	10.7%*	50.8%	62.3%
SPA 3–San Gabriel Valley	433,000	58,000	13.3%	45.6%	14.4%*	23.2%*	38.9%	43.9%
SPA 4–Metro	317,000	30,000	9.4%	61.2%	53.0%	5.9%*	35.1%*	48.7%
SPA 5–West Area	125,000	17,000	13.9%*	34.3%*	–	9.4%*	–	31.2%*
SPA 6–South	329,000	40,000	12.3%	76.9%	75.9%	6.4%*	44.5%	57.1%
SPA 7–East Area	408,000	35,000	8.6%	57.6%	45.7%	2.3%*	18.1%*	71.5%
SPA 8–South Bay	412,000	51,000	12.4%	42.6%	23.9%*	11.1%*	20.6%*	54.3%
Madera	38,000	4,000	9.6%	51.6%	42.0%*	–	53.2%	44.4%*
Marin	51,000	3,000	5.8%*	–	–	–	–	75.9%
Mendocino	20,000	2,000	8.1%*	52.7%*	–	–	–	42.1%*
Merced	76,000	11,000	14.2%	85.4%	50.9%	7.3%*	45.3%*	66.4%

	TOTAL CHILDREN	NUMBER	PERCENT	AMONG CHILDREN WITH ACTIVE ASTHMA				
				IN PAST 12 MONTHS...				
				LOW-INCOME	WITH MEDI-CAL	UNINSURED	ER VISIT	3 OR MORE MD VISITS
Monterey	117,000	9,000	7.9%*	58.6%*	44.3%*	24.7%*	47.2%*	71.9%
Napa	32,000	5,000	14.4%	33.6%*	33.6%*	19.5%*	29.1%*	33.6%*
Nevada	18,000	3,000	13.9%*	–	–	–	58.1%	73.7%
Orange	757,000	69,000	9.2%	29.3%	30.4%	5.6%*	34.5%	57.3%
Placer	81,000	13,000	15.5%	20.4%*	–	6.5%*	12.2%*	53.2%
Riverside	547,000	27,000	4.9%	19.5%*	9.7%*	1.9%	39.2%	59.1%
Sacramento	350,000	31,000	8.8%	45.3%	31.0%*	2.5%*	18.5%*	46.6%
San Benito	16,000	1,000	4.9%*	–	–	–	–	64.3%
San Bernardino	571,000	62,000	10.8%	51.5%	36.2%	7.6%*	54.9%	60.3%
San Diego	759,000	66,000	8.8%	35.2%	16.4%	11.9%*	30.1%	55.8%
1–North Coastal	123,000	11,000	9.3%	45.1%*	25.3%*	20.7%*	43.0%*	50.7%*
2–North Central	117,000	9,000	7.4%	20.3%*	7.2%*	–	32.9%*	70.2%
3–Central	125,000	14,000	11.3%*	41.8%*	9.3%*	19.7%*	20.7%*	44.1%*
4–South	114,000	11,000	9.6%	40.7%*	30.7%*	–	35.5%*	51.8%
5–East	120,000	14,000	11.5%	34.0%*	11.3%*	19.9%*	30.9%*	73.4%
6–North Inland	159,000	8,000	4.7%	18.6%*	15.3%*	–	16.2%*	43.0%*
San Francisco	108,000	11,000	10.5%*	32.5%*	15.3%*	–	–	13.4%*
San Joaquin	204,000	31,000	15.1%	54.3%	43.5%*	11.8%*	23.7%*	43.1%*
San Luis Obispo	51,000	5,000	9.3%*	54.2%*	–	–	16.8%*	46.0%*
San Mateo	153,000	22,000	14.3%	8.8%*	7.8%*	–	12.3%*	32.0%*
Santa Barbara	102,000	10,000	10.2%*	26.1%*	32.0%*	–	15.1%*	16.4%*
Santa Clara	432,000	37,000	8.5%	45.8%	24.1%*	22.4%*	20.7%*	75.3%
Santa Cruz	56,000	6,000	10.0%*	34.5%*	43.1%*	–	28.8%*	77.4%
Shasta	40,000	4,000	9.6%*	70.1%	14.4%*	39.9%*	74.7%	62.9%*
Solano	104,000	9,000	8.8%*	13.0%*	14.5%*	21.1%*	44.7%*	53.0%*
Sonoma	110,000	9,000	8.3%*	30.7%*	15.0%*	8.9%*	20.9%*	24.6%*

North Inland region, the California areas with the lowest prevalence of active asthma included San Benito County (4.9 percent), Riverside County (4.9 percent), Marin County (5.8 percent), and Butte County (6.8 percent). The areas with the highest prevalence of active asthma included San Joaquin County (15.1 percent), Contra Costa County (15.2 percent), Placer County (15.5 percent), Kings County (15.7 percent), and the Del Norte/Siskiyou/Lassen/Trinity/Modoc/Plumas/Sierra County cluster (15.9 percent).

**County characteristics.** The characteristics of county residents with a chronic condition are determined in part by the characteristics of all county residents, so it is not possible to compare the characteristics of those with a chronic condition between counties. It is possible to compare the characteristics of children with active asthma to the characteristics of all children in the same county, however. For example, in San Joaquin County, 54.3 percent of children with active asthma lived in families with low-incomes (Table 10.1), which was even higher than the rate for all San Joaquin County children (44.2 percent) (Table 9.1). Note that due to the relatively low number of children reporting active asthma in many counties, the estimates of many of their characteristics are not statistically stable (indicated by an asterisk) and should be considered “ballpark” estimates.

**Racial and ethnic characteristics.** Among California children reporting active asthma,

	TOTAL CHILDREN	NUMBER	PERCENT	AMONG CHILDREN WITH ACTIVE ASTHMA IN PAST 12 MONTHS...				
				LOW-INCOME	WITH MEDI-CAL	UNINSURED	ER VISIT	3 OR MORE MD VISITS
Stanislaus	154,000	16,000	10.3%	67.0%	49.9%*	–	35.7%*	76.1%
Sutter, Yuba	47,000	6,000	13.4%	70.7%	60.2%	–	32.9%*	65.7%
Tehama, Glenn, Colusa	27,000	2,000	9.0%*	63.5%	36.8%*	21.9%*	54.7%	71.0%
Tulare	125,000	15,000	12.4%	51.7%	31.7%*	5.7%*	33.4%*	67.9%
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	33,000	4,000	13.6%*	48.8%*	–	28.3%*	22.7%*	25.7%*
Ventura	206,000	16,000	7.9%*	28.1%*	21.5%*	25.4%*	62.0%	70.9%
Yolo	44,000	4,000	8.4%	20.0%*	14.5%*	–	13.6%*	36.6%*

\*Indicates an unstable estimate.

Dash (–) indicates the sample size is too small to provide an estimate.

Notes: Active asthma is defined in the Appendix under “Variables.” Age range and population numbers reflect the fact that an asthma diagnosis is not given to children younger than 1.

Source: 2007 California Health Interview Survey.

**Table 10.2. Children Ages 1 to 17 with Active Asthma, by Race/Ethnicity and Region, 2007**

	TOTAL	LATINO	AMERICAN INDIAN/ ALASKA NATIVE	ASIAN	AFRICAN AMERICAN	WHITE	OTHER SINGLE/ TWO OR MORE RACES
<b>California</b>	<b>979,000</b>	<b>42.5%</b>	<b>5.3%</b>	<b>9.4%</b>	<b>10.1%</b>	<b>29.3%</b>	<b>3.4%</b>
Northern/Sierra Counties	32,000	12.5%	19.0%	–	2.6%*	63.4%	1.8%*
Bay Area Counties	182,000	30.6%	1.9%*	27.0%	8.9%*	28.5%	3.2%*
Sacramento Area Counties	50,000	19.5%*	9.9%*	5.7%*	12.7%*	49.3%	3.0%*
San Joaquin Valley Counties	150,000	46.4%	8.1%*	6.5%*	4.9%*	30.5%	3.6%*
Central Coast Counties	47,000	49.1%	13.6%*	–	–	35.2%	2.1%*
Los Angeles County	289,000	59.0%	2.6%*	4.3%	13.8%	16.1%	4.1%*
Other Southern California Counties	229,000	36.6%	5.2%*	7.4%*	12.2%	35.3%	3.3%*

\*Indicates an unstable estimate.

Dash (–) indicates the sample size is too small to provide an estimate.

Notes: Active asthma and race/ethnicity are defined in the Appendix under “Variables.” Age range and population numbers reflect the fact that an asthma diagnosis is not given to children younger than 1. Totals may not add up to 100 percent due to rounding.

Source: 2007 California Health Interview Survey.

the racial-ethnic distribution was 42.5 percent Latino, 5.3 percent American Indian/Alaska Native, 9.4 percent Asian, 10.1 percent African American, 29.3 percent White, and 3.4 percent other single/two or more races (see Table 10.2). African Americans had a much higher proportion of child active asthma in comparison to their total child population (10.1 percent versus 5.9 percent; see also Table 9.2). Programs targeting children with active asthma need to include outreach to all racial and ethnic minorities in all regions of the state, but children reporting active asthma were disproportionately Latino in the Bay Area counties and Los Angeles County, disproportionately Asian American in the Bay Area counties and San Joaquin Valley, disproportionately American Indian/Alaska Native in the Northern/Sierra counties, Sacramento Area counties, San Joaquin Valley, and Other Southern California counties, and disproportionately African American in all California regions except for the San Joaquin Valley and Central Coast counties.

## Health Status

Poor health status among children has been linked to chronic conditions and disability.<sup>26,27</sup> Parent or self-reported health status is often used as a global measure for overall child health and well-being, and an important outcome in pediatric research.<sup>28</sup> By identifying children with fair-to-poor health status in the past year a better understanding of demographic characteristics, frequent health care

**Table 11.1. Children with Fair-to-Poor Health Status, 2007**

	TOTAL CHILD POPULATION	NUMBER	PERCENT	AMONG CHILDREN WITH FAIR-TO-POOR HEALTH				
				LOW-INCOME	WITH MEDI-CAL	UNINSURED	ER VISIT	3 OR MORE MD VISITS <sup>1</sup>
				IN PAST 12 MONTHS...				
<b>California</b>	<b>9,912,000</b>	<b>678,000</b>	<b>6.8%</b>	<b>66.5%</b>	<b>41.4%</b>	<b>21.4%</b>	<b>28.3%</b>	<b>43.4%</b>
Alameda	363,000	25,000	6.8% *	59.4%	53.1%	6.4*	4.4*	52.8*
Butte	47,000	–	–	–	–	–	–	–
Contra Costa	255,000	13,000	5.0% *	66.4%	14.0*	51.3%*	–	13.6% *
Del Norte, Siskiyou, Lassen, Trinity, Modoc, Plumas, Sierra	32,000	–	–	–	–	–	–	–
El Dorado	40,000	1,000	2.3% *	–	–	–	–	–
Fresno	270,000	24,000	9.1% *	84.1%	66.2%	27.7%*	31.5%*	36.6%*
Humboldt	28,000	2,000	6.6% *	–	–	–	47.3%*	47.7%*
Imperial	47,000	6,000	12.3%	82.7%	65.8%	–	43.4%*	53.9%
Kern	243,000	15,000	6.0% *	73.1%	73.1%	11.5%*	53.4%	47.8%*
Kings	43,000	4,000	10.0%	72.9%	69.2%	–	26.3%*	34.2%*
Lake	13,000	1,000	9.1% *	52.8%*	59.7%*	–	–	74.4%
Los Angeles	2,815,000	235,000	8.4%	67.4%	41.8%	22.8%	25.8%	42.2%
SPA 1–Antelope Valley	95,000	4,000	4.2% *	60.6%*	32.2%*	41.3%*	32.2%*	82.1%
SPA 2–San Fernando	582,000	33,000	5.6%	49.7%	34.6%*	13.9%*	33.8%*	58.1%
SPA 3–San Gabriel Valley	459,000	44,000	9.6%	58.3%	36.7%	22.4%*	21.6%*	29.3%
SPA 4–Metro	329,000	25,000	7.6%	86.8%	30.5%*	33.2%*	26.9%*	44.5%*
SPA 5–West Area	129,000	5,000	4.2% *	38.9%*	38.9%*	–	11.6%*	61.1%*
SPA 6–South	351,000	49,000	14.1%	84.8%	57.9%	23.2%*	20.6%*	41.8%*
SPA 7–East Area	432,000	41,000	9.4%	52.1%	31.4%*	21.8%*	33.1%*	49.6%
SPA 8–South Bay	440,000	34,000	7.7%	80.0%	54.3%	26.1%*	22.9%*	25.9%*
Madera	42,000	2,000	4.4% *	88.1%	37.1%*	48.7%*	–	–
Marin	54,000	1,000	1.8% *	100.0%*	–	–	–	100.0%
Mendocino	20,000	2,000	9.9% *	51.9%*	29.2%*	–	–	–
Merced	78,000	6,000	7.8% *	98.2%	66.3%	26.9%*	22.1%*	64.0%

utilization, and barriers to care facing children in California can be gained.

**Statewide characteristics.** In 2007, about 7 percent of California children younger than 18 were reported to have fair-to-poor health status in the past year (see Table 11.1). Sixty-seven percent of children who reported fair-to-poor health status were from low-income families, compared to 40.6 percent for all children statewide. Access to health care among children with fair-to-poor health status was lower than among all children in California. Among children reporting fair-to-poor health status, 41.4 percent reported having Medi-Cal coverage, which was higher than the 25.8 percent enrollment among all children in California. However, 21.4 percent of children with fair-to-poor health status reported being uninsured at some point in the past year, compared to 9.4 percent of all California children. There was also a substantially higher frequency of health care usage among children with fair-to-poor health status compared to all children in California. Four out of ten children reporting fair-to-poor health status saw a doctor at least three times in the past year, but only 28.3 percent went to the ER.

**County prevalence.** The prevalence of fair-to-poor health status among children ranged from 1.8 percent in Marin County to 15.1 percent in Monterey County. In addition to Marin County, the California areas with the lowest prevalence of fair-to-poor health status included the San Diego South region, (2.1 percent),

	TOTAL CHILD POPULATION	NUMBER	PERCENT	AMONG CHILDREN WITH FAIR-TO-POOR HEALTH				
				LOW-INCOME	WITH MEDI-CAL	UNINSURED	ER VISIT	3 OR MORE MD VISITS <sup>†</sup>
							IN PAST 12 MONTHS...	
Monterey	120,000	18,000	15.1% *	88.8%	39.8% *	18.0% *	25.9% *	63.2%
Napa	33,000	3,000	9.1% *	100.0% *	46.1% *	35.3% *	45.1% *	–
Nevada	19,000	1,000	4.5% *	–	–	–	75.9% *	100.0%
Orange	792,000	56,000	7.1%	71.0%	45.7%	12.6% *	55.3%	36.1% *
Placer	82,000	2,000	2.8% *	33.0% *	–	33.0% *	33.0% *	38.3% *
Riverside	582,000	38,000	6.5%	68.8%	36.8% *	33.1% *	32.0% *	47.8%
Sacramento	377,000	11,000	2.9% *	57.8% *	21.7% *	9.4% *	52.2% *	16.4% *
San Benito	17,000	2,000	9.6% *	67.0%	–	–	–	56.2% *
San Bernardino	595,000	29,000	4.9%	49.6%	24.1% *	37.5% *	39.6%	44.3%
San Diego	801,000	37,000	4.6%	57.5%	21.9% *	14.5% *	19.5% *	42.5%
1 – North Coastal	130,000	8,000	6.1% *	75.9%	–	30.3% *	13.7% *	17.5% *
2 – North Central	133,000	5,000	3.4% *	55.6% *	48.3% *	–	53.0% *	62.7% *
3 – Central	130,000	7,000	5.1% *	76.7%	44.8% *	34.2% *	–	33.8% *
4 – South	120,000	3,000	2.1% *	55.9% *	37.5% *	–	–	30.2% *
5 – East	124,000	9,000	7.0% *	37.1% *	–	–	18.9% *	61.0% *
6 – North Inland	163,000	7,000	4.2% *	44.9% *	24.7% *	10.4% *	22.3% *	47.8% *
San Francisco	115,000	5,000	4.1% *	37.7% *	–	–	–	40.6% *
San Joaquin	220,000	19,000	8.7% *	87.1%	59.5% *	23.3% *	43.1% *	47.7% *
San Luis Obispo	53,000	1,000	2.3% *	66.8% *	–	–	100.0%	–
San Mateo	164,000	7,000	4.0% *	11.7% *	11.7% *	–	11.7% *	34.6% *
Santa Barbara	105,000	9,000	8.7% *	67.4% *	55.1% *	16.6% *	5.9% *	51.8% *
Santa Clara	454,000	39,000	8.5%	63.0%	36.0% *	27.0% *	24.3% *	60.9%
Santa Cruz	58,000	2,000	3.4% *	65.6% *	87.9% *	–	41.7% *	41.7% *
Shasta	42,000	–	–	–	–	–	–	–
Solano	108,000	5,000	4.4% *	40.7% *	40.7% *	40.2% *	10.4% *	–
Sonoma	115,000	12,000	10.8% *	39.8% *	9.2% *	55.5% *	8.4% *	23.0% *

El Dorado (2.3 percent), San Luis Obispo County (2.3 percent), and Placer County (2.8 percent). The areas with the highest prevalence of fair-to-poor health status included Imperial County (12.3 percent), the Tehama/Glenn/Colusa County cluster (13.5 percent), Los Angeles SPA 6-South (14.1 percent) and Monterey County (15.1 percent).

**County characteristics.** The characteristics of county residents with a chronic condition are determined in part by the characteristics of all county residents, so it is not possible to compare the characteristics of those with a chronic condition between counties. It is possible to compare the characteristics of children with fair-to-poor health status to the characteristics of all children in the same county, however. For example, in San Bernardino County, 39.6 percent of children with fair-to-poor reported health used the ER in the past year (Table 11.1), which is about twice the 22.4 percent of all children in San Bernardino County who reported using the ER in the past year (Table 9.1). Note that due to the relatively low number of children with fair-to-poor reported health in many counties, the estimates of many of their characteristics are not statistically stable (indicated by an asterisk) and should be considered “ballpark” estimates.

**Racial and ethnic characteristics.** Among California children reporting fair-to-poor health status, the racial-ethnic distribution was 60.5 percent Latino, 7.0 percent American Indian/

	TOTAL CHILD POPULATION	NUMBER	PERCENT	AMONG CHILDREN WITH FAIR-TO-POOR HEALTH IN PAST 12 MONTHS...				
				LOW-INCOME	WITH MEDI-CAL	UNINSURED	ER VISIT	3 OR MORE MD VISITS <sup>†</sup>
Stanislaus	164,000	14,000	8.7%*	55.0%*	64.1%	4.4%*	26.3%*	47.3%*
Sutter, Yuba	49,000	2,000	4.8%*	51.6%*	27.8%*	–	46.3%*	76.5%
Tehama, Glenn, Colusa	29,000	4,000	13.5%*	81.3%	58.8%*	–	27.0%*	87.3%
Tulare	133,000	14,000	10.8%	74.3%	60.2%	5.6%*	9.2%*	36.3%*
Tuolumne, Calaveras, Amador, Inyo, Mariposa, Mono, Alpine	34,000	–	–	–	–	–	–	–
Ventura	214,000	8,000	3.6%*	72.9%	34.5%*	14.3%*	25.9%*	42.4%*
Yolo	46,000	3,000	5.8%*	85.4%*	31.2%*	42.9%*	–	69.7%*

\*Indicates an unstable estimate.

<sup>†</sup>For children ages 2 to 17, calculations reflect an average of three or more doctor visits; for children ages 0 to 1, calculations reflect an average of four or more doctor visits.

Dash (–) indicates the sample size is too small to provide an estimate.

Notes: Fair-to-poor health status is defined in the Appendix under “Variables.”

Source: 2007 California Health Interview Survey.

Alaska Native, 9.5 percent Asian, 5.0 percent African American, 15.8 percent White, and 2.2 percent other single/two or more races (Table 11.2). Compared to their total child population in California, Latinos had a higher proportion of children reporting fair-to-poor health status (60.5 percent versus 44.5 percent, see also Table 9.2). Similarly, American Indians/Alaska Natives were over-represented in the child population reporting fair-to-poor health status (7.0 percent versus 5.2 percent). Programs targeting children with fair-to-poor health status need to include outreach to all racial and ethnic minorities in all regions of the state, but children reporting fair-to-poor health status were disproportionately Latino in all California regions, disproportionately Asian American in the Bay Area counties and Central Coast counties, disproportionately African American in the San Joaquin Valley, and disproportionately American Indian/Alaska Native in the Bay Area counties, Sacramento Area counties, the San Joaquin Valley, and other Southern California counties.

**Table 11.2. Children with Fair-to-Poor Health Status, by Race/Ethnicity and Region, 2007**

	TOTAL	LATINO	AMERICAN INDIAN/ ALASKA NATIVE	ASIAN	AFRICAN AMERICAN	WHITE	OTHER SINGLE/ TWO OR MORE RACES
<b>California</b>	<b>678,000</b>	<b>60.5%</b>	<b>7.0%*</b>	<b>9.5%</b>	<b>5.0%</b>	<b>15.8%</b>	<b>2.2%*</b>
Northern/Sierra Counties	13,000	36.4%	6.9%	–	–	54.2%	–
Bay Area Counties	109,000	39.9%	8.5%*	30.8%	6.1%*	12.9%*	1.9%
Sacramento Area Counties	17,000	39.1%*	20.4%*	5.1%*	–	28.8%*	5.6%*
San Joaquin Valley Counties	99,000	59.1%	9.9%*	3.7%*	7.5%*	19.7%	–
Central Coast Counties	40,000	84.3%	3.6%*	5.2%*	–	4.1%*	2.8%*
Los Angeles County	235,000	68.1%	4.9%*	8.1%*	5.4%*	11.4%	2.1%*
Other Southern California Counties	166,000	62.5%	6.7%*	3.2%*	4.1%*	20.2%	3.4%*

\*Indicates an unstable estimate.

Dash (–) indicates the sample size is too small to provide an estimate.

Notes: Fair-to-poor health status and race/ethnicity are defined in the Appendix under “Variables.” Totals may not add up to 100 percent due to rounding.

Source: 2007 California Health Interview Survey.

## IV. Conclusion

THE TRANSITION FROM ACUTE TO CHRONIC HEALTH CONDITIONS signals a change for how health care should be delivered in the United States. Seven out of ten American adults die each year due to a chronic disease, and nearly one in two live with at least one chronic health condition such as heart disease, cancer, stroke, or diabetes.<sup>29</sup> Chronic health conditions require early diagnosis, continual disease management, and high-quality treatment. Although prevention is key to addressing the incidence of new cases, health care services that are available, accessible, and affordable are essential for those living with a chronic health condition.

Findings from this report show that one-third of California adults (36 percent) reported having at least one chronic health condition (including active asthma, congestive heart failure, diabetes, hypertension, or psychological distress) and 16 percent of California children reported having at least one chronic health condition (including active asthma or fair-to-poor health status). Over half of California adults reporting a chronic condition (58 percent) reported frequent health care utilization defined as visiting the doctor at least four times or having an ER visit in the past year. For children reporting a chronic condition, 61 percent reported frequent health care utilization, visiting the doctor at least three times or having an ER visit in the past year. However, one-fourth of California adults and almost one-fourth of California children reporting at least one chronic condition had barriers to health care, such as no health insurance, no usual source of care, and difficulty communicating with doctors—all of which may exacerbate chronic conditions and lead to preventable complications and avoidable hospitalizations.

Among counties, Lake County reported the highest burden of chronic health conditions, ranking among the worst health groups for all seven chronic health conditions. The counties that ranked among the worst health groups for six of the seven health conditions were: Fresno County, Los Angeles SPA

6-South, Napa County, the Sutter/Yuba County cluster, and the Tehama/Glenn/Colusa County cluster. These results suggest that these counties merit a closer examination to see why they have such high rates of chronic conditions, combined with high rates of barriers and use. In contrast, Marin and San Luis Obispo counties reported the lowest burden of chronic health conditions, ranking among the best health groups for all seven chronic health conditions. Those counties that ranked among the best health groups for six of the seven chronic health conditions were: Los Angeles SPA 5-West, San Diego North Central and North Inland regions, San Francisco County, Santa Clara County, and Sonoma County.

Living with a chronic health condition reduces a person's overall quality of life, and increases morbidity and mortality. Much of the morbidity and mortality related to chronic health conditions can be attributed to modifiable behaviors, but these behaviors must also go hand-in-hand with access to quality health care.<sup>30</sup> Amid the rising number of people living with a chronic health condition and increasingly high expenditures to treat them, this report's findings highlight the need to develop community-based prevention programs, improve the quality and accessibility of health care services, and reduce preventable hospitalizations. By understanding the burden of these chronic health conditions, public health workers, health care providers, and policymakers can target their efforts to prevent the onset of chronic diseases and improve chronic disease management and treatment in California.

## Appendix

### Data Sources

Chronic Conditions of Californians used data from CHIS. CHIS is the largest on-going state-level health survey in the country. CHIS is a telephone survey of California's non-institutionalized population that has been conducted every two years since 2001. CHIS randomly selects households drawn from every county in California for its random-digit dial (RDD) telephone survey. This report used 2007 CHIS data where there were more than 51,000 completed interviews with adults and over 13,000 with adolescents and children. CHIS data were weighted to adjust for geographic oversampling and to reflect California statewide population characteristics. The health and demographic variables are obtained from CHIS.

This project received institutional review board approval from the UCLA Human Subjects Protection Committee.

### Geographical Definitions

Data are reported either at the county-level or regional level. For all data except for race/ethnicity, data are reported at the county level. However, for counties with small populations, neighboring counties are combined to ensure stable estimates. Combined counties include: Del Norte/Siskiyou/Lassen/Trinity/Modoc/Plumas/Sierra, the Sutter/Yuba cluster, the Tehama/Glenn/Colusa cluster, and the Tuolumne/Calaveras/Amador/Inyo/Mariposa cluster. Since data were available for sub-county areas, Los Angeles and San Diego counties were divided into smaller regions. The eight designated SPAs were used for Los Angeles County: SPA 1-Antelope

Valley, SPA 2-San Fernando Valley, SPA 3-San Gabriel Valley, SPA 4-Metro, SPA 5-West, SPA 6-South, SPA 7-East, and SPA 8-South Bay. The six health regions were used for San Diego County: Region 1-North Coastal, Region 2-North Central, Region 3-Central, San Diego Region 4-South, San Diego Region 5-East, and San Diego Region 6-North Inland.

For the distribution of chronic conditions by race/ethnicity, small sample sizes limited the comparison to a regional level. The analysis divided the regions into Northern/Sierra counties, Bay Area counties, Sacramento Area counties, San Joaquin Valley, Central Coast counties, Los Angeles county, and other Southern California counties. The Northern/Sierra region includes Alpine, Amador, Butte, Calaveras, Colusa, Del Norte, Glenn, Humboldt, Inyo, Lake, Lassen, Mariposa, Mendocino, Modoc, Mono, Nevada, Plumas, Shasta, Sierra, Siskiyou, Sutter, Tehama, Trinity, Tuolumne, and Yuba counties. The Bay Area region includes Alameda, Contra Costa, Marin, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties. The Sacramento region includes El Dorado, Placer, Sacramento, and Yolo counties. The San Joaquin Valley region includes Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, and Tulare counties. The Central Coast region includes Monterey, San Benito, San Luis Obispo, Santa Barbara, Santa Cruz, and Ventura counties. The Los Angeles region is Los Angeles County. The Southern California region includes Imperial, Orange, Riverside, San Bernardino, and San Diego counties.

### Variables

#### Chronic Health Condition Variables

**Chronic conditions index.** For adults ages 18 or older, the chronic conditions index is computed from adults who reported one or more of the following conditions: active asthma, congestive heart failure, diabetes, hypertension, or psychological distress. For children ages 17 or younger, the chronic conditions index is computed from the responses of children who reported one or more of the following conditions: active asthma and fair-to-poor health status.

**Active asthma.** Defined as those who reported ever having been diagnosed with asthma by a doctor and who reported current symptoms in the past 12 months. Current symptoms include any one of the following: experienced an asthma attack or episode, experienced weekly to daily symptoms, went to the ER or had an urgent care visit because of an asthma episode, is taking daily asthma medication, or missed work or school due to asthma. This measure expands on the previous 2003 CHIS measure of current asthma used in the first edition of *Chronic Conditions*.

**Congestive heart failure.** Defined as those who reported ever having been diagnosed with congestive heart failure by a doctor. The first edition of Chronic Conditions of Californians used a broader categorization of adults diagnosed with heart disease found in the 2003 CHIS.

**Diabetes.** Defined as those who reported ever having been diagnosed with diabetes by a doctor. It does not



include those who have been diagnosed with borderline or pre-diabetes.

**Fair-to-poor health status.** Parent-reported or self-reported health status is measured through the following categories: excellent, very good, good, fair or poor. Health status was dichotomized into excellent/very good/good, and fair/poor. In CHIS, parents reported the health status for children ages 0 to 11. Parent reports have been found to be a valid proxy for child self-reports.<sup>31</sup> Teenagers, ages 12 to 17, reported their own health status.

**Hypertension.** Defined as those who reported ever having been diagnosed with high blood pressure or hypertension by a doctor.

**Psychological distress.** Defined as those who reported a likelihood of having a diagnosable mental illness in the past 30 days. Psychological distress is measured using the Kessler 6-item scale which captures “nonspecific psychological distress rather than specific mental illnesses and is intended to identify persons with mental health problems severe enough to cause moderate to serious impairment in social, occupational, or school functioning and to require treatment.”<sup>32</sup> Items include feeling nervous, hopeless, restless/fidgety, that nothing would cheer you up, that everything was an effort, and worthlessness. Using a scale of 1 (none of the time) to 5 (all of the time) for each item, a score of 13 or higher indicates psychological distress in the past month.

## Demographic Variables

**Low-income.** Defined as having a family household income below 200 percent of the Federal Poverty Level. Respondents were asked about their household income in the year previous to the interview. In 2006, the federal poverty guideline for a family of three living in California was set at an income level of \$16,600.<sup>33</sup>

**Race and ethnicity.** Race and ethnicity were based on the categorizations by a UCLA Center for Health Policy Research construct variable which is informed by the categories used by the U.S. Office of Management and Budget and California Department of Finance: American Indian/Alaska Native, Asian, Black or African American, Hispanic/Latino, Native Hawaiian/Other Pacific Islanders, and White. The American Indian/Alaska Native category was top-coded to include all respondents who had any mention of American Indian/Alaska Native race. Due to small sample sizes, Native Hawaiian/Other Pacific Islanders, unspecified other race categories, and multi-racial individuals were combined into one aggregate category.

## Health Care Access and Utilization Variables

**Medi-Cal.** Defined as those who reported Medi-Cal coverage during the past year.

**Uninsured.** Defined as those who reported no health insurance in the past year or having insurance only part of the past year.

**Health care utilization index or frequent health care use:** Measured by any ER visit and by the number of doctor visits in the past year. To capture more frequent health care utilization, the average annual number of doctor visits was used as the benchmark. For adults, the analysis used four or more doctor visits in

the past year. For children ages 2 to 17, three or more doctor visits was used; for children ages 0 to 1, four or more doctor visits.

**Barriers to health care index:** Defined as adults or children who reported no health insurance at any time in past year, no usual source of care, or had difficulty communicating with their doctor.

## Data Analysis

**Descriptive statistics.** Univariate analysis was conducted to provide the prevalence or the total number of people with a chronic condition. Bivariate analysis examined each chronic condition and indices with demographic variables, health care utilization variables, and barriers to health care variables. These cross-tabulations provided comparisons across subgroups or key health care factors in relation to each chronic condition. The estimates presented were based on a sample of California respondents. Each estimate has a level of error associated with it and a range in which the true estimate falls. The range, or 95 percent confidence interval, for the estimate is a statistic that approximates the point estimates that would be obtained 95 out of 100 times if the same survey were repeated with a new sample in the same population. An unstable estimate exceeds the generally acceptable amount of variation (30 percent) as measured by the coefficient of variation.

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