Health Conditions

Preventing disease and injury is central to improving the health of Los Angeles residents. To effectively promote health, reduce injury, and prevent disease we must better understand the leading causes of death and disability, as well as ways to transform the behavioral, social, economic, and environmental determinants of health. As described in this Health Conditions Chapter, many of the greatest health challenges facing Los Angeles are related to chronic disease, most of which have modifiable risk factors and opportunities for prevention.

The City of Los Angeles will benefit when every resident has the opportunity to live a long, healthy, and productive life; however, the burden of disease and injury does not fall equitably on the population. As highlighted throughout this chapter, city residents face many health disparities—defined as differences in health outcomes or risk factors based on race/ethnicity, geographic location, socio-economic status, gender, or other characteristics. Reducing these disparities in health will improve the quality of life for all residents.

Improving the health and quality of life of Angelenos will require focused and sustained efforts from a range of partners. This chapter, which provides an overview of the health conditions in the City of Los Angeles, is divided into four sections: 1) health outcomes, 2) health status, 3) health behaviors and risk factors, and 4) access to care. The topics highlighted in each section were chosen based on the most serious, yet modifiable, health challenges facing the City. Each section provides a detailed description of the most currently available data for Los Angeles and highlights relevant health disparities.

The **Health Outcomes** section focuses on overall causes of mortality, including:
- Life expectancy, which measures the length of time an average person is expected to live.
- The leading causes of death and premature death, including coronary heart disease, stroke, respiratory diseases, Alzheimer’s disease, diabetes, and injury.

The **Health Status** section focuses on indicators of health-related quality of life, including:
- Self-perceived health status
- Number of unhealthy days due to physical or mental health
- Mental health and mental illness

The **Health Behaviors and Risk Factors** section focuses on key opportunities for preventing disease and promoting health, including:
- Reducing tobacco use, which decreases the risk for cardiovascular and respiratory diseases and cancers.
- Reducing adult and childhood obesity, which decreases the risk for diabetes, heart disease, stroke, and cancers.
- Promoting physical activity, which can help control weight, improve mental health and physical functioning, and reduce the risk of disease.
- Reducing low birth weight, which helps decrease infant mortality and improve long-term physical and mental health.

Finally, the **Access to Care** section identifies challenges to residents’ ability to get the preventative and acute care they need. This section describes:
- The location of health care facilities and physical barriers to accessing care.
- Areas where there are shortages of hospitals, health care clinics, and mental health providers.

Additional health data related to alcohol use (Chapter 8), motor vehicle injuries (Chapter 9), and physical violence (Chapter 10) is included in subsequent chapters.

**MAPS AND INDICATORS**

The maps presented in this section, along with their associated indicators, are described below. This is not a comprehensive evaluation of all health indicators, but rather, a selection of key indicators that paint a broad picture of health conditions and health disparities for the City of Los Angeles.

- **Life Expectancy at Birth**: The map shows the life expectancy at birth in years by Public Use Microdata Area (PUMA). Life expectancy at birth was calculated by the American Human Development Project with mortality data from the California Department of Public Health, Center for Health Statistics, and population estimates from the U.S. Census Bureau for the years 2006-2008. PUMAs are geographic areas that are built on census tracts and counties, and each contains a population of 100,000.
- **Coronary Heart Disease Mortality Rate per 100,000 Residents by City Council District**: The map shows the age-adjusted rate of coronary heart disease mortality per 100,000 residents by City Council District from 2004-2008. Mortality data is from Los Angeles County mortality records, and mortality rates were calculated by the Los Angeles County Public Health Department.37
- **Rate of Heart Attacks in Population Ages 45 and Over**: The map shows the age-adjusted heart attack rate per 10,000 residents age 45 and older at the zip code level. Data is derived from the California Office of Statewide Health Planning and Development (OSHPD) 2010 Emergency Department and Patient Discharge Databases.38
- **Stroke Mortality Rate per 100,000 Residents**: The map shows the age-adjusted rate of stroke mortality per 100,000 residents by City Council District from 2004-2008. Mortality data is from Los Angeles County mortality records, and mortality rates were calculated by the Los Angeles County Public Health Department.39
- **Diabetes Mortality Rate per 100,000 Residents by City Council District**: The map shows the age-adjusted rate of diabetes mortality per 100,000 by City Council District from 2004-2008. Mortality data is from Los Angeles County mortality records, and mortality rates were calculated by the Los Angeles County Public Health Department.40
- **Respiratory Disease Mortality Rate per 100,000 Residents by Community Plan Area**: The map shows the crude rate of respiratory disease mortality per 100,000 by CPA in 2000. Mortality data is from Los Angeles County mortality records and is collected by the Los Angeles County Public Health Department.41

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37 The ICD-10 codes of coronary heart disease are I11 and I20-125.
38 Heart attack counts include hospitalizations with a principal diagnosis of ICD-9 code 410, which includes cardiac infarction; coronary embolism, occlusion, rupture, or thrombosis; infarction of the heart, myocardium, or ventricle; rupture of the heart, myocardium or ventricle.
39 The primary ICD-10 codes for stroke are I60-I69.
40 The ICD-10 codes for diabetes are E10-E14.
41 Diseases of the respiratory system include all deaths classified by the ICD-10 diagnoses code J.
Life expectancy measures the length of time an average person is expected to live and is considered a key indicator of the overall health of a population. It measures the risks of a population for disease and premature death. Life expectancy for California residents slightly exceeds that of the United States. Statewide, California’s life expectancy was 80.1 years from 2006-2008, compared to 78.6 years for the U.S. The life expectancy for the Los Angeles Metropolitan Area (80.7 years) is similar to the statewide average.

As shown on Map 37 and Figure 15, life expectancy across the City of Los Angeles varies significantly, with a nearly 12-year difference between the areas with the highest and lowest life expectancy. Residents in the Watts PUMA have a life expectancy of 72.8 years compared to 84.7 years in the Bel Air-Brentwood-Pacific Palisades PUMA. The PUMAs with the highest life expectancy were located on the Westside of Los Angeles, in the Santa Monica Mountains, and along the southern portion of the San Fernando Valley. In fact, the Bel Air-Brentwood-Pacific Palisades and West Los Angeles PUMAs ranked among the top 20 areas for life expectancy in California. The areas with the lowest life expectancy included the PUMAs south of Downtown Los Angeles along the Interstate 110 corridor, the neighborhoods west of Downtown, and the West Adams-Baldwin Hills-Leimert neighborhood. Five of these areas were in the bottom 20 neighborhoods for the entire state. The Watts PUMA has the lowest rate in California, representing the same life expectancy rate for the U.S. from almost 40 years ago.

42 Asthma counts include ED visits and hospitalizations with a principal diagnosis of ICD-9 code 493.
44 Due to the fact that many PUMAs span portions of the City of Los Angeles and neighboring jurisdictions, caution should be shown in interpreting results for the City. Furthermore, the Census Bureau’s PUMA designations do not align with recognized community boundaries for the City, and often the Census Bureau uses names no longer recognized by the City or neighborhood organizations. For example, the Census Bureau defines the South Los Angeles CPA as Hancock (South Central / Westmont) and East Adams-Exposition Park. For more information on PUMAs, Map 5 shows the PUMA designations with CPA boundaries for the City.
Leading Causes of Death

The leading causes of death refer to the most common causes of death, based on the frequency of their occurrence. Identifying which risk factors are associated with certain causes of death can help prevent disease and keep people healthier. Some lifestyle-related risk factors for the leading causes of death include an unhealthy diet, high blood pressure, smoking, insufficient physical activity, obesity/overweight, and diabetes.46

The death rate among residents in Los Angeles County has declined over 30% during the 15-year period from 1995 through 2009. While mortality rates have declined in the County, the City still experiences a number of challenges with several leading causes of death. As shown in Figure 16, coronary heart disease (CHD) was the leading cause of death across all five Service Planning Areas (SPAs) representing the City,47 followed by stroke and lung cancer. Emphysema/chronic obstructive pulmonary disease (COPD) also ranked in the top five for the County and in five all SPAs in the City. Notably, Metro and South Bay SPAs were the only two with pneumonia/influenza in their top five ranks. Alzheimer’s disease became an increasingly important cause of death in the County and in SPAs 2 (San Fernando Valley) and 5 (West). Furthermore, diabetes has emerged as a leading cause of death in SPA 6 (South).48

The South SPA suffered from the highest overall age-adjusted mortality rate for the leading cause of death (coronary heart disease rate of 178 per 100,000 residents), over one-quarter higher than the County rate. Across the board, age-adjusted mortality rates for the South SPA were significantly higher than any other SPA in the City. South Bay SPA and San Fernando SPA followed closely with higher than average age-adjusted mortality rates. The West SPA had the lowest age-adjusted mortality rates.49

By race and ethnicity and gender, Asian or Pacific Islander women had the lowest overall death rate (at 344 deaths for all causes per 100,000 population), while African American men had the highest (1,083 per 100,000 population). The death rate of African American men was nearly two times the age-adjusted death rate for the County (583 deaths per 100,000). Overall, Whites and Asian or Pacific Islanders lived longer than African American and Hispanics.50


47 Due the fact that many SPAs span portions of the City of Los Angeles and neighboring jurisdictions, caution should be shown in interpreting results for the City. For more information on the SPAs, visit http://publichealth.lacounty.gov/chs/SPAMain/ServicePlanningAreas.htm
Premature Death

While over half of Los Angeles County residents lived to age 75 in 2009, 45% died before this age. If we expect people to live to at least 75 years of age, which is a standard cut-off point to quantify the impact of early death, then individuals who die earlier than 75 years are considered to have died prematurely. A person who dies at age 65 is considered to have lost 10 years of expected life and does not lose any life years. By adding up the years of life lost, the leading causes of premature death can be identified. Premature deaths are monitored to identify preventable deaths, health inequities, and access to medical care.11

Coronary heart disease was not only the leading cause of death in the County, but was also the leading cause of premature death for all of Los Angeles County. Homicide was the second leading cause of premature death in the Metro, South, and South Bay SPAs, and suicide was the second leading cause of premature death in the San Fernando and West SPAs and the fourth leading cause of death in the Metro SPA. Breast cancer was a leading cause of premature death in the West SPA, while diabetes caused a significant number of premature deaths in the South SPA. The number of years lost from premature death was highest in the San Fernando SPA (12,132 deaths resulting in 84,124 years of life lost [YLL]), followed by South Bay (9,455 deaths resulting in 76,521 YLL), San Gabriel (10,636 deaths resulting in 71,001 YLL), and South (5,638 results resulting in 65,813 YLL) SPAs, while the West SPA had the fewest years of life lost (3,967 deaths resulting in 20,426 YLL). Figure 17 shows the leading causes of premature death for each SPA corresponding to the City of Los Angeles and the estimated number of YLL.12

Figure 17: Leading Causes of Premature Death (Years of Life Lost Before Age 75) in Service Planning Areas Corresponding to the City of Los Angeles for 2009

<table>
<thead>
<tr>
<th>Rank</th>
<th>LA COUNTY</th>
<th>SPA 2: San Fernando</th>
<th>SPA 4: Metro</th>
<th>SPA 5: West</th>
<th>SPA 6: South</th>
<th>SPA 8: South Bay</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Coronary Heart Disease</td>
<td>Coronary Heart Disease</td>
<td>Coronary Heart Disease</td>
<td>Coronary Heart Disease</td>
<td>Coronary Heart Disease</td>
<td>Coronary Heart Disease</td>
</tr>
<tr>
<td>2</td>
<td>Stroke</td>
<td>Stroke</td>
<td>Stroke</td>
<td>Stroke</td>
<td>Stroke</td>
<td>Stroke</td>
</tr>
<tr>
<td>3</td>
<td>Liver Disease</td>
<td>Liver Disease</td>
<td>Liver Disease</td>
<td>Liver Disease</td>
<td>Diabetes</td>
<td>Diabetes</td>
</tr>
<tr>
<td>5</td>
<td>Suicide</td>
<td>Suicide</td>
<td>Suicide</td>
<td>Suicide</td>
<td>Suicide</td>
<td>Suicide</td>
</tr>
<tr>
<td>6</td>
<td>Drug Overdose</td>
<td>Drug Overdose</td>
<td>Drug Overdose</td>
<td>Drug Overdose</td>
<td>Drug Overdose</td>
<td>Drug Overdose</td>
</tr>
<tr>
<td>7</td>
<td>Diabetes</td>
<td>Diabetes</td>
<td>Diabetes</td>
<td>Diabetes</td>
<td>Diabetes</td>
<td>Diabetes</td>
</tr>
<tr>
<td>9</td>
<td>Liver Disease</td>
<td>Liver Disease</td>
<td>Liver Disease</td>
<td>Liver Disease</td>
<td>Liver Disease</td>
<td>Liver Disease</td>
</tr>
<tr>
<td>10</td>
<td>Coronary Heart Disease</td>
<td>Coronary Heart Disease</td>
<td>Coronary Heart Disease</td>
<td>Coronary Heart Disease</td>
<td>Coronary Heart Disease</td>
<td>Coronary Heart Disease</td>
</tr>
</tbody>
</table>

Note: Death Rank denotes rank among the leading causes of all deaths.

Community health interventions can help reduce preventable causes of death, such as coronary heart disease, diabetes, and motor vehicle collisions. Factors such as unhealthy eating, sedentary lifestyles, tobacco use, high blood pressure, presence of alcohol while driving, and roadway speeds are risk factors for many of the leading causes of premature death in Los Angeles.

Heart Disease

Heart disease is a general term used to refer to a range of diseases that affect the heart. Some types of heart disease include diseases of the blood vessels (such as coronary artery disease); heart rhythm problems (arrhythmias); and heart conditions that are born with (congenital heart defects).13 Coronary artery disease, which is a term often used interchangeably with coronary heart disease (CHD), is the most common type of heart disease. It is a disease in which plaque builds up on the inside walls of the coronary arteries. Over time, the plaque can harden and/or rupture, reducing blood flow to the heart and potentially resulting in angina (chest pain) or heart attack. Long-term, CHD can also lead to arrhythmia and heart failure.14

Heart disease is the leading cause of death in the U.S. Each year more than 600,000 people die from heart disease. CHD alone accounts for 385,000 deaths annually. Furthermore, 715,000 Americans have a heart attack each year, and 73% of these heart attacks are the first heart attack for an individual. The major risk factors for heart disease include high blood pressure, high low-density lipoprotein (LDL) cholesterol, and smoking. Other medical conditions and lifestyle factors contribute to a higher risk for heart disease, including diabetes, being overweight or obesity, poor diet, physical inactivity, and excessive alcohol use.15

Similar to national trends, CHD was the leading cause of death across Los Angeles County and the City of Los Angeles. The age-adjusted mortality rate due to CHD across the City of Los Angeles was 165 CHD deaths per 100,000 residents between 2004 and 2008. In City Council Districts 11 and 5, the rates were 126 and 135, well below the City’s average as shown on Map 38. The highest rates of CHD deaths were in Council Districts 2, 8, and 9. Council District 9 had the highest rate of CHD at 218 per 100,000.16

In 2010, the rate of heart attacks in the population age 45 and over revealed a similar spatial pattern to the CHD map, as shown on Map 39. Many of the zip codes with the lowest heart attack rates were located in Council District 5 and 11, while most of the zip codes with the highest rates were adjacent to Council Districts 2, 8, and 9. The average heart attack rate for all zip codes in Los Angeles was 40.1 per 100,000. Four zip codes were two standard deviations above the City average, and these included zip codes 91401, 91405, 90027, and 90003.

Stroke

Stroke is a leading cause of death in the U.S.,17 and is the second leading cause of death in Los Angeles County.18 As a stroke can occur when a blood vessel in the brain ruptures or a clot blocks the blood supply to the brain, which can cause death or disability. The risk of stroke can be reduced through healthy lifestyle choices, such as eating a healthy diet, being active, limiting smoking and alcohol use, and maintaining a healthy weight.19

16 Los Angeles County Public Health Department, Office of Health Assessment and Epidemiology. (2011, September). Obesity and Related Mortality in Los Angeles County.
Map 40 shows the stroke mortality for the City. In terms of stroke mortality, Council Districts 8 and 9 had the highest rates in the City at 59 and 48 per 100,000 residents, ranking among the communities in Los Angeles County with the highest stroke mortality rates. Conversely, Council Districts 4, 5, 13, and 14 had among the lowest rates of stroke mortality in the County.60

Diabetes
Diabetes is the seventh leading cause of death in the United States, and is a health problem that is growing in severity and concern. Since the 1970s, the risk of developing diabetes has increased by over 50% for American adults. Researchers have attributed this increased risk to higher rates of obesity, poorer diet, and reduced physical activity levels.61

Diabetes is a disease that affects how a person’s body uses blood sugar (glucose). The body produces insulin to convert glucose, which is derived from food, to energy in order to fuel the body’s cells. Insulin takes the glucose from the blood into the cells. Diabetes is a disease in which the body is unable to make insulin (type 1 diabetes) or produce enough or use insulin well (type 2 diabetes), resulting in a buildup of glucose in the blood. Complications from diabetes include heart disease, blindness, kidney failure, and lower-extremity amputations.62

In 2011, 9% of Los Angeles County adults over age 18 reported having been diagnosed with diabetes, an increase from 6% in 1997. The percentage of adults with diabetes increased with age. Twenty-four percent of adults age 65 and over reported having been diagnosed with diabetes, the highest percentage in any age category. By race and ethnicity, 13% of African American respondents reported having been diagnosed with diabetes, the highest rate among race and ethnicity groups, while White respondents (9%) had the lowest rate.63

Figure 18 shows the percentage of adults who reported having been diagnosed with diabetes for each Health District (HD).64 The West (6%) and Southeast (6%) HDs had the lowest proportions of adults diagnosed with diabetes. The West Valley (12%) and South (11%) HDs had the highest percentages.65

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Respiratory Disease and Asthma
Diseases of the respiratory system are an important public health issue. Respiratory diseases include a range of conditions, including upper respiratory infections, such as the common cold; influenza and pneumonia; and chronic lower respiratory diseases, such as asthma and chronic obstructive pulmonary disease (COPD).

In the U.S., more than 13.6 million adults have been diagnosed with COPD and 23 million people have asthma.67 COPD is a preventable and treatable disease that results in airflow blockage and breathing problems. Exposure to cigarette smoke is a key factor in developing COPD, but asthma, exposure to air pollutants, genetic factors, and respiratory infections play a role in the development of COPD.68 Asthma is a chronic lung disease that includes inflammation and intermittent narrowing of the airways. Asthma can cause repeated episodes of wheezing, chest tightness, shortness of breath, and coughing. Asthma attacks are triggered

60 Los Angeles County Public Health Department, Office of Health Assessment and Epidemiology. (2011, September). Obesity and Related Mortality in Los Angeles County.
64 Due the fact that many HDs span portions of the City of Los Angeles and neighboring jurisdictions, caution should be shown in interpreting results for the City.
66 Los Angeles County Public Health Department, Office of Health Assessment and Epidemiology. (2011, September). Obesity and Related Mortality in Los Angeles County.
Over 1,900 people in Los Angeles died from diseases of the respiratory system in 2009. As shown on Map 42, the highest rates of respiratory disease were in the Encino-Tarzana and Sunland-Tujunga-Shadow Hills-Lake View Terrace-East La Tuna Canyon CPAs, where the rate exceeded 80 respiratory disease deaths per 100,000 residents. Rates of respiratory disease deaths were lowest in the Southeast Los Angeles, Arleta-Pacoima, Mission Hills-Panorama City-North Hills, and Sylmar CPAs.

In general, the spatial pattern of emergency department visits and hospitalizations related to asthma for the City of Los Angeles were similar to those of respiratory disease mortality. Map 43 and Map 44 show emergency department visits for asthma, and Map 45 and Map 46 show asthma-related hospitalizations. Zip codes within and adjacent to the South Los Angeles, Southeast Los Angeles, Boyle Heights CPAs, the area eastern San Fernando Valley, and the area near the Port of Los Angeles had the highest rates of asthma hospitalizations and emergency department visits for adults and children. The Westside and Santa Monica Mountains areas had the lowest rates of asthma hospitalizations and emergency department visits.

Zip code 90013 (Central City and Central City North CPA) has the highest rate of asthma-related emergency room visits for children age 17 and under (314 per 10,000). The next five zip codes with the highest rates of asthma-related emergency room visits for children (all greater than 150 per 100,000) are 90043, 90247, 90008, 90047, and 90302. These zip codes intersect with the West Adams-Baldwin Hills-Leimert, South Los Angeles, and Harbor Gateway CPAs.

**Leading Causes of Injury Death**

From 2000 to 2009, the leading causes of injury death in the City of Los Angeles were from firearm homicides (4,288) followed by unintentional motor vehicle traffic deaths (3,593) and unintentional poisoning, including drug overdoses (2,816). Figure 19 shows the five leading causes of injury death in the City.

**Figure 19: Leading Causes of Injury Death in the City of Los Angeles from 2000-2009**


From 2000-2009, the zip codes with the largest number of homicides with a firearm were 90003 (224 homicides), 90011 (219 homicides), and 90044 (298 homicides), but the highest rates of homicide with a firearm per 100,000 residents were in zip codes 90047 (35.0 homicides per 100,000 residents), 90059 (38.1 homicides per 100,000 residents) and 90061 (40.2 homicides per 100,000 residents), which are all in the southern area of Los Angeles. For more information on homicides, Chapter 10 includes additional discussion. The number of traffic fatalities were highest in zip code 90011 (97 fatalities), 90044 (111 fatalities), and 91331 (107 fatalities), but the highest rates of motor vehicle and traffic deaths per 100,000 residents were in zip codes 90047 (13.2 deaths per 100,000 residents), 90059 (12.9 deaths per 100,000), and 91306 (12.9 deaths per 100,000). Chapter 9 includes additional information about motor vehicle collisions and injuries. The highest rates for unintentional poisoning occurred in 90014 (62.8 deaths per 100,000) and 90021 (53.2 deaths per 100,000), which are in the general downtown Los Angeles area. The highest rate for unintentional falls occurred in 90048 (around the mid-Wilshire area) and the highest rate for suicide by firearm occurred in 90292 (near Venice). The data indicates that certain causes of injury death are clustered in Los Angeles, with homicides occurring at higher rates in the south of Downtown and firearm suicides and unintentional poisoning and falls occurring at higher rates on the Westside.

**Health Status**

Measures of health status provide information on the health-related quality of life for Los Angeles residents. This section includes information on self-perceived health status, the average number of unhealthy days due to physical or mental health, the average number of days limited by physical or mental health, and mental health and mental illness.

**Self-Perceived Health Status**

Self-perceived health status is a measure of how a person perceives his or her health and is a useful indicator of health, allowing comparisons across different populations and geographies. Individuals may choose excellent, very good, good, fair, or poor when responding to this survey question. In 2011, 21% of adults (age 18 and over) and 6% of children (age 17 and under) in Los Angeles County reported their health to be fair or poor. Health status varied by age, as higher proportions of older children and older adults reported fair or poor health. Figure 20 shows the proportion of adults and children who reported fair or poor mental health for...
Each HD corresponding to the City of Los Angeles.72 Adults in the South (28%), Southwest (28%), Northeast (30%), and Southeast (39%) HDs had higher proportions of the population that reported having fair or poor health. Children in the Northeast (10%) and Southwest (12%) HDs reported the highest levels of fair or poor health, though this estimate may be statistically unstable.73

Figure 20: Percent of Adults (18+ years old) and Children (Age 17 and under) who Reported Fair or Poor Health by Health District in 2011

Unhealthy Days and Days Limited by Physical or Mental Health
Physically and mentally unhealthy days indicate the average number of days during the last month that an individual rated their physical or mental health as not good. In 2011, individuals in Los Angeles County reported an average of 5.4 unhealthy days (physical and/or mental) in the past 30 days. Females in Los Angeles County reported a higher average number of unhealthy days (6.1) than males (4.8), the age group 50 to 59 had the largest number of unhealthy days (7.3) among age groups, and American Indians/Alaskan Natives (8.4) and African Americans (7.8) reported the most unhealthy days by race and ethnicity. Persons with a disability reported 2.4 times more unhealthy days a month (13) than the average county resident.

Figure 21 shows the average number of unhealthy days due to physical or mental health in the past 30 days for each HD corresponding to the City of Los Angeles.74 Residents of the South (6.9), East Valley (6.4), and Hollywood (6.4) HDs exceeded the Los Angeles County average by one full day, while residents of the West HD (4.2) had the lowest average number of unhealthy days in 2011.75

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72 Due the fact that many HDs span portions of the City of Los Angeles and neighboring jurisdictions, caution should be shown in interpreting results for the City.
74 Due the fact that many HDs span portions of the City of Los Angeles and neighboring jurisdictions, caution should be shown in interpreting results for the City.
Physical and mental health can also limit a person’s ability to do his or her usual activities, such as eating, walking, and getting out of bed. In 2011, the average number of days in the past 30 days that a Los Angeles County adult’s activities were limited due to poor physical and/or mental health was 2.1. The average number of days increased with age and disability status. Residents in the Northeast (2.7) and East Valley (2.8) HDs reported having the largest number of days limited by physical or mental health, while residents of the Hollywood HD had the lowest (less than one).

Mental Health and Mental Illness

Although mental health is often used to describe mental illness and the two are related, mental health and mental illness represent different psychological states. Mental health describes a person’s overall psychological, emotional, and social well-being. Good mental health is a state of well-being in which a person is able to cope with everyday events, work productively, and contribute to their community. It is estimated that only 17% of U.S. adults are considered in a state of good mental health.77

The U.S. Surgeon General defines mental illness as “collectively all diagnosable mental disorders” or “health conditions that are characterized by alterations in thinking, mood, or behavior (or some combination thereof) associated with distress and/or impaired functioning.” Serious mental illnesses include schizophrenia, bipolar disorder, obsessive compulsive disorder, panic disorder, post-traumatic stress disorder, and borderline personality disorder. Mental illness can affect persons of any age, race, ethnicity, or income, and is treatable.78 Nationally, 75% of mental illnesses appear by age 24, yet less than half of children with diagnosable mental health problems receive treatment.79

Social and emotional ties play a beneficial role in mental health outcomes, such as stress, psychological well-being, depression, and anxiety. In 2011, 64% of adults in Los Angeles County reported receiving sufficient social and emotional support. The portion of adults who reported receiving social and emotional support declined with age (younger adults reported receiving more support) and increased with income and education level (wealthier and better educated adults reported receiving more support). Seventy-seven percent or more of adult respondents in the West, Northeast, Central, San Fernando, and Harbor HDs reported receiving sufficient social and emotional support. Less than half of the adults in the South and Southwest HDs responded that they received sufficient support; however, these estimates may be unreliable due to variability in the surveyed/sampled population.80

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79 President Obama’s 23 Point Executive Order on Mental Health and Gun Control, January 2013.
Depression is the most common type of mental illness affecting adults in the U.S. The CDC estimates that by the year 2020, depression will be the second leading cause of disability throughout the world, after ischemic heart disease. In 2011, approximately 8% of adults in Los Angeles County reported having been diagnosed with depression and either being treated for depression or having symptoms of depression. Adults from the ages of 50 to 59 and 60 to 64 were the most likely age groups to have reported depression, while Whites and African Americans were the most likely race and ethnicity groups to report depression. Twenty-six percent of the persons with disabilities responded that they had depression. By HD, adult respondents in the Southeast (5%), Central (6%), and Southwest (7%) districts were less likely to report depression than the county average. Adults in the Northeast (10%), West (10%), Hollywood (11%), Harbor (11%), and South (14%) had proportions of the population with the highest self-reported depression, and each HD exceeded 10%.

The Los Angeles County Department of Mental Health estimates the prevalence of serious emotional disturbance (SED) in children and serious mental illness (SMI) in adults for the County. An SED is defined by the Substance Abuse and Mental Health Services Administration as a person under age 18, which “currently has, or at any time during the last year, had a diagnosable mental, behavioral, or emotional disorder of sufficient duration to meet diagnostic criteria specified within the Diagnostic and Statistical Manual of Mental Disorders.” Similarly, SMI is defined as having a diagnosable mental, behavioral, or emotional disorder that resulted in functional impairment that substantially interfered with or limited one or more major life activities.
Counties, an estimated 616,000 people, or approximately 6% of the population lived with a SED or SMI in 2010. Of the Service Planning Areas (SPA), SPA 2 (covering the San Fernando Valley) had the largest number of people living with a SED or SMI (132,816), followed by SPA 3 (109,077) and SPA 8 (95,212). Over 53% of the people living with a SED or SMI were Latino (7% of total Latino population), 27% were White (6% of total White population), 11% were Asian or Pacific Islander (5% of total Asian or Pacific Islander Population), and 9% were African American (7% of total African American population). Map 49 shows the prevalence of SED and SMI for each census tract in Los Angeles. Within the City of Los Angeles, two census tracts (one in SPA 2 and one in SPA 4) were estimated to have a prevalence of a SED or SMI at greater than 10% of the total population. These tracts were located in the Mission Hills-Panorama City-North Hills CPA and adjacent to the Central City, Northeast Los Angeles, and Boyle Heights CPAs.

Map 50 shows the 2010 mental illness hospitalization rate per 100,000 residents in the City of Los Angeles. The zip codes with the lowest hospitalization rates tended to be located on the Westside of the City and in the Santa Monica Mountains. The zip codes with the highest hospitalization rates were 90095, 90071, 90014, 90013, 90731, 90021, 90043, 91040, and 90028. Each of these zip codes had rates greater than 1,000 hospitalizations per 100,000 residents or one hospitalization per 100 residents.

HEALTH BEHAVIORS AND RISK FACTORS

The health behaviors and risk factors section focuses on key opportunities for preventing disease and promoting health, focusing on healthy body weight, physical activity, smoking, and low birth weight.

Overweight and Obese Populations

Obesity is the most prevalent, chronic, and relapsing disorder of the 21st century. It is a leading cause of the nation’s mortality, morbidity, disability, healthcare utilization, and healthcare costs. California has experienced a dramatic increase in obesity during the last few decades. In 1985, less than 10% of California’s population was obese; by 2010, over 20% of Californians were considered obese.84

The terms “overweight” and “obese” describe weight ranges that are above what is medically accepted as healthy. The most common measure of healthy and unhealthy weight is the “Body Mass Index” (BMI), which is a function that takes into account both height and weight. Table 1 presents standard BMI score ranges and their definitions, including underweight, healthy weight, overweight, and obese for adults.85

Table 1: Standard Body Mass Index Categories

<table>
<thead>
<tr>
<th>BMI</th>
<th>Considered</th>
</tr>
</thead>
<tbody>
<tr>
<td>Below 18.5</td>
<td>Underweight</td>
</tr>
<tr>
<td>18.5 to 24.9</td>
<td>Healthy weight</td>
</tr>
<tr>
<td>25.0 to 29.9</td>
<td>Overweight</td>
</tr>
<tr>
<td>30 or higher</td>
<td>Obese</td>
</tr>
</tbody>
</table>


BMI is also used to evaluate healthy and unhealthy weight in children. Overweight is defined as a BMI at or above the 85th percentile and below the 95th percentile for children of the same sex and age. Obesity is defined as a BMI at or above the 95th percentile for children of the same sex and age.86

Excess body weight can increase a person’s risk for other diseases or health problems. Studies have found statistically significant associations between obesity and increased incidence of type II diabetes, many types of cancer, heart disease and stroke, asthma, gallbladder disease, osteoarthritis, and chronic back pain. When compared to normal weight females, overweight females are four times more likely to develop type II diabetes, while obese females are over 12 times more likely to develop type II diabetes compared to normal weight females. In men, these corresponding risk levels are over two times and nearly seven times to develop type II diabetes, respectively.87

In Los Angeles County, the prevalence of adult obesity increased from 14% in 1997 to 24% in 2011, while the percentage of overweight adults increased from 34% in 1997 to 37% in 2011. As shown on Figure 24 the West HD had the lowest prevalence of adult obesity and the second lowest proportion of overweight adults. The Harbor HD had the second lowest percentage of obese adults (17%), but the second highest prevalence of overweight adults (44%). The South, Southeast, Southwest, and San Fernando HDs had higher proportions of obese adults than the County average, with the South and Southeast HDs exceeding 30%.88

In Los Angeles County, obesity rates among school-aged children increased from 19% in 1999 to 22% in 2010. Map 47 and Figure 21 shows the prevalence of childhood obesity by CPAs. The percentage of obese children was derived using Body Mass Index measurements of 5th, 7th, and 9th grade school children from the California Physical Fitness Testing Program. Children were categorized as obese if their BMI exceeded the 95th percentile by age and gender. In five of the 35 CPAs, the prevalence of childhood obesity exceeds 30%, including the Harbor Gateway (35%), Boyle Heights (32%), Southeast Los Angeles (30%), and South Los Angeles (30%) CPAs. The Brentwood-Pacific Palisades (11%) and Bel Air-Beverly Crest (12%) CPAs have the lowest proportions of childhood obesity, and both are less than half the citywide average of 25%.90

Figure 25: Prevalence of Childhood Obesity by Community Plan Area in 2010

Source: Office of Health Assessment and Epidemiology, Los Angeles County Department of Public Health. 2011 Los Angeles County Health Survey: Childhood Obesity by City of Los Angeles Community Planning Area [Data File].
Physical Activity

Physical activity is important in maintaining health and preventing disease. Regular physical activity can help control weight and reduce the risk of obesity, cardiovascular disease, type II diabetes, and some cancers. Exercise also helps to strengthen bones and muscles and improve mental health and mood, both of which can lead to a longer life. According to the 2008 Physical Activity Guidelines for Americans, adults should participate in at least 150 minutes a week of moderate intensity physical activity (such as walking), or 75 minutes a week of vigorous-intensity aerobic physical activity (such as running). While no specific amount of time is recommended for muscle-strengthening exercise, such as push-ups, pull-ups, carrying heavy loads, or heavy gardening, the guidelines suggest adults should engage in muscle-strengthening activities two days a week. Children and adolescents should engage in 60 minutes or more of physical activity daily, and muscle-strengthening and bone-strengthening physical activity on at least 3 days of the week.

In 2011, approximately 30% of Los Angeles County adults age 18 and over reported meeting the physical activity guidelines for aerobic and muscle-strengthening activity. Figure 26 shows the percentage of adults who meet the physical activity guidelines for each HD. The South, West, Hollywood, San Fernando, and Harbor HDs all exceeded the County average. Less than 30% of the adults in the Southwest, East Valley, Southeast, Central, and West Valley HDs reported meeting the physical guidelines. Adults in the Southwest (15%) and East Valley (14%) HDs were the most likely to report engaging in no physical activity.

In 2011, approximately 29% of children countywide reported engaging in more than 60 minutes of physical activity five days a week. Approximately 60% reported participating in less than 60 minutes of physical activity five days a week, while 11% of the children did not participate in any physical activity. Children who identified as Asian or Pacific Islander (16%) were much less likely to report engaging in more than 60 minutes of physical activity five days a week, while African American children (44%) were the most likely to meet the guideline.

Figure 27 shows the percentage of children age 6 to 17 that reported participating in more than 60 minutes of physical activity, five days a week, for each health district in the City. Nearly half of the children in the South HD (45%) reported meeting the recommended level of physical activity, the highest of any district. Children in the Central HD (16%) were the least likely to report meeting the recommended level of physical activity, though this estimate may be statistically unstable.

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Low Birth Weight

Low birth weight is a key indicator of overall health. Infants born with a low birth weight (under 2,500 grams or 5.51 pounds) have an increased risk of developing asthma, coronary heart disease, diabetes, and other potentially fatal conditions associated with air pollution or heat.\(^\text{96}\)\(^\text{97}\)\(^\text{98}\) Low birth weight infants are also at risk of developing behavioral problems and impaired cognitive growth.\(^\text{99}\)

The percentage of live births weighing less than 2,500 grams was 6.8% in California and 7.3% in Los Angeles County in 2010.\(^\text{100}\) Map 48 shows the percentage of low birth weight infants by zip code in 2010. In the City, the percentage of low birth weight infants exceeded 10% in 15 zip codes, with zip code 90021 being over 17%. While these zip codes had the highest proportions of low birth weight babies, they did not necessarily have the largest total number. The total number of low birth weight babies in the zip codes 90002, 90003, 90011, 90044, 91331, 90001, 90059, and 91342 exceeded 95.

Smoking and Tobacco Use

In the U.S., tobacco use is the leading cause of preventable death and is responsible for one in five deaths annually. Smoking harms nearly every organ in the body and causes death, cardiovascular disease, respiratory disease, and many types of cancers. Smoking increases the risk and severity of many other health issues, such as infertility, preterm delivery, low birth weight, sudden infant death syndrome, coronary heart disease, and stroke. Even brief repeated exposure to secondhand smoke can be harmful, increasing the risk of heart disease, lung cancer and other health problems in adults and children. Additionally, secondhand smoke can stay in the air long after a cigarette has been extinguished, and can be involuntarily inhaled by nonsmokers.\(^\text{101}\)

Cigarette smoking is linked to one out seven deaths in Los Angeles County and tobacco-related diseases cost the County $4.3 billion per year.\(^\text{102}\) The leading causes of smoking-related deaths are lung cancer, coronary heart disease, and chronic airway obstruction.\(^\text{103}\)

In the City of Los Angeles, an estimated 14% of the adult population smoked cigarettes in 2007, accounting for about one million adults. It was estimated that City Council Districts 8 and 9 had among the highest percentages of the adults who smoked for communities in the County. These areas roughly correlate with the South and Southeast CPAs. There were marked characteristics among smokers – men were nearly twice as likely to be smokers as females and African Americans adults were more likely to smoke than adults in any other racial or ethnic group.\(^\text{104}\)

\(^\text{102}\) County of Los Angeles Public Health. (June 2010). Cigarette Smoking in Los Angeles County: Local Data to Inform Tobacco Policy.
\(^\text{104}\) County of Los Angeles Public Health. (June 2010). Cigarette Smoking in Los Angeles County: Local Data to Inform Tobacco Policy.
Access to Care

Health Care Shortage Areas and Access

A Health Professional Shortage Area (HPSA) is a federal designation given to areas that demonstrate a shortage of healthcare professionals. This designation is based on a ratio of population to physicians and access to healthcare. HPSAs are defined for primary care professionals, dentists, and mental health professionals. 105

There are shortages of primary care health professionals in the Southeast Los Angeles, South Los Angeles, Wilmington-Harbor City, North Hollywood-Valley Village, Arleta-Pacoima, and the Venice CPAs, which is a chronic problem in many underserved areas. As shown on Map 51, over 700,000 people lived in these HPSAs in 2010, with nearly half living in the Southeast Los Angeles and South Los Angeles CPAs. While there were fewer dental and mental HPSAs than primary care HSPAs in the City of Los Angeles in 2010, dental professional shortage areas covered portions of the Central City, Boyle Heights, and Southeast Los Angeles CPAs, and mental health shortage areas covered parts of the Palms-Mar Vista-Del Rey and Venice CPAs.

Along with health professional shortages, the distance and access to transportation and health care facilities can impact health care utilization among the elderly, poor, and Non-White populations. 106 107 The distance to hospitals in central-city areas has a significant effect on whether children and the elderly received preventative care. 108

105 For primary care services, the U.S. Department of Health and Human Services (HHS) defines an HPSA as having a population to physician ratio of 3,500 people to 1 physician, or 3,000 to 1 plus the population demonstrates an unusually high need for primary medical care services. HSS defines high need as having high rates of births or infant deaths, or a large proportion of the population with incomes below the poverty level. For dental services, the population to dentist ratio is 5,000 to 1, or 4,000 to 1 plus the population demonstrates an unusually high need. HSS defines high needs as a large proportion of the population with incomes below the poverty level or a large population that does not have access to fluoridated water. For mental health services, the HHS defines an HPSA as having a ratio of population to core mental health professionals of 6,000 to 1 and a population to psychiatrist ratio of 20,000 to 1; or a population to CMHP ratio of 9,000 to 1: or a population to psychiatrist ratio of 30,000 to 1. For more information, visit the U.S. Department of Health and Human Services. (1993). HPSA Designation Criteria. Retrieved from http://bhpr.hrsa.gov/shortage/hpsas/designationcriteria/designationcriteria.html


Life Expectancy at Birth (2006-2008)

Legend
Life Expectancy at Birth in Years (2006-2008)
- 72.8 to 78.2
- 78.2 to 79.7
- 79.7 to 80.9
- 80.9 to 82.3
- 82.3 to 84.7

Transportation Systems
- Metro Rail Stations
- Metro LINER Stations
- Metrolink Stations
- Proposed Metro Rail Stations
- Metro Rail Lines
- Metro Liner Lines
- Metrolink Rail Lines
- Proposed Metro Rail Projects
- Interstates and Highways
- State Highways

Jurisdictional Boundaries
- Community Plan Areas

Life expectancy at birth was calculated by the American Human Development Project with mortality data from the California Department of Public Health, Center for Health Statistics and population estimates from the U.S. Census Bureau for the years 2006-2008. Life expectancy for California and the United States was 80.1 and 78.6, respectively. Data were classified by quintile.


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Produced by Raimi + Associates for the City of Los Angeles and Los Angeles County. Made possible with funding from the Centers for Disease Control and Prevention through the Los Angeles County Department of Public Health and The California Endowment May 2013.
Data was compiled by the Los Angeles County Public Health Department from county mortality records. The map shows the age-adjusted rate of coronary heart disease mortality (ICD-10 codes I11 and I20-I25) per 100,000 by City Council District. Data were collected for 2004-2008 and classified by quartile.


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Heart Attacks Rate in Population 45 and Over per 10,000 Residents (2010)

Data was compiled from the California Office of Statewide Health Planning and Development (OSHPD) 2010 Emergency Department and Patient Discharge Databases. The map shows the rate of heart attacks (ICD-9 code 410) in the population 45 and over per zip code. Rates were age-adjusted for the 2000 population, calculated per 10,000 residents, and shown in quartiles. Zip codes shown in white indicate that rates were not calculated as there were <= 5 hospitalizations.


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Data was compiled by the Los Angeles County Public Health Department from county mortality records. The map shows the age-adjusted rate of stroke mortality (ICD-10 codes I60-I69) per 100,000 by City Council District. Data were collected for 2004-2008 and classified by quartile.


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Map 41
Diabetes Mortality Rate per 100,000 Residents by City Council District (2004-2008)

Data was compiled by the Los Angeles County Public Health Department from county mortality records. The map shows the age-adjusted rate of diabetes mortality (ICD-10 codes E10-E14) per 100,000 by City Council District. Data were collected for 2004-2008 and classified by quartile.


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Data was compiled by the Los Angeles County Public Health Department from county mortality records. The map shows the rate of deaths from diseases of the respiratory system (ICD-10 code J) per 100,000 by community plan area. Data were collected for 2009 and classified by quartile. Rates were not calculated in areas with < 20 deaths.


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Map 43
Asthma-Related Emergency Department Visit Rate in Population 17 and Under per 10,000 Residents (2010)

Data was compiled from the California Office of Statewide Health Planning and Development (OSHPD) 2010 Emergency Department and Patient Discharge Databases. The map shows the rate of asthma-related emergency department visits in the population 17 and under per zip code. Rates are age-adjusted for the 2000 population, calculated per 10,000 residents, and shown in quartiles. Zip codes shown in white indicate that rates were not calculated as there were ≤ 5 emergency department visits.


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Asthma-Related Emergency Department Visit Rate in Population 18 and Over per 10,000 Residents (2010)

Legend

2010 Asthma Emergency Department Visits 18 and Over (age-adjusted rate, per 10,000 people)
- Less than 23.40
- 23.40 to 33.80
- 33.80 to 48.40
- Greater than 48.40
- Rate Not Calculated

Transportation Systems
- Metro Rail Stations
- Metro Liner Stations
- Metrolink Stations
- Proposed Metro Rail Stations
- Metro Rail Lines
- Metro Liner Lines
- Metrolink Rail Lines
- Proposed Metro Rail Projects
- Interstates and Highways
- State Highways

Jurisdictional Boundaries
- Community Plan Areas

Data was compiled from the California Office of Statewide Health Planning and Development (OSHPD) 2010 Emergency Department and Patient Discharge Databases. The map shows the rate of asthma-related emergency department visits in the population 18 and over per zip code. Rates are age-adjusted for the 2000 population, calculated per 10,000 residents, and shown in quartiles. Zip codes shown in white indicate that rates were not calculated as there were <= 5 emergency department visits.


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Map 45
Asthma-Related Hospitalization Rate in Population 17 and Under per 10,000 Residents (2010)

Legend
2010 Asthma Hospitalizations for Population 17 and Under (age-adjusted rate, per 10,000 people)
- Rate Not Calculated
- Less than 12.90
- 12.90 to 16.20
- 16.20 to 19.90
- Greater than 19.90

Transportation Systems
- Metro Rail Stations
- Metro Liner Stations
- Metrolink Stations
- Proposed Metro Rail Stations
- Metro Rail Lines
- Metro Liner Lines
- Metrolink Rail Lines
- Proposed Metro Rail Projects
- Interstates and Highways
- State Highways

Jurisdictional Boundaries
- Community Plan Areas
- State Highways

Data was compiled from the California Office of Statewide Health Planning and Development (OSHPD) 2010 Emergency Department and Patient Discharge Databases. The map shows the rate of asthma-related hospitalizations in the population 17 and under per zip code. Rates are age-adjusted for the 2000 population, calculated per 10,000 residents, and shown in quartiles. Zip codes shown in white indicate that rates were not calculated as there were <= 5 emergency department visits.


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5 10 15 Mins
Map 46
Asthma-Related Hospitalization Rate in Population 18 and Over per 10,000 Residents (2010)

Legend
2010 Asthma Hospitalizations for Population 18 and Over (age-adjusted rate, per 10,000 people)
- Less than 7.90
- 7.90 to 11.30
- 11.30 to 15.90
- Greater than 15.90
- Rate Not Calculated

Transportation Systems
ijkstra Rail Stations
Metro Liner Stations
Metrolink Stations
Proposed Metro Rail Stations
Metro Rail Lines
Metro Liner Lines
Metrolink Rail Lines
Proposed Metro Rail Projects
Interstates and Highways
State Highways

Jurisdictional Boundaries
Community Plan Areas

Data was compiled from the California Office of Statewide Health Planning and Development (OSHPD) 2010 Emergency Department and Patient Discharge Databases. The map shows the rate of asthma-related hospitalizations in the population 18 and over per zip code. Rates are age-adjusted for the 2000 population, calculated per 10,000 residents, and shown in quartiles. Zip codes shown in white indicate that rates were not calculated as there were <= 5 emergency department visits.


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The map shows the prevalence of childhood obesity in 2010. The percentage of children was derived using Body Mass Index (BMI) measurements of school children from the California Physical Fitness Testing Program. Data are shown by Community Plan Area and classified by quartile. Estimates may be unstable and should be interpreted cautiously for the Bel Air-Beverly Crest, Central City North, Harbor Gateway, and Westwood CPAs due to the small number of students with BMI-related information.

**Data Sources:**
- Obesity Data, 2010 Los Angeles County Public Health Department
- Community Plan Areas, 2012 City of Los Angeles Department of City Planning

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Data was compiled from the California Department of Public Health Center for Health Statistics 2010 Birth Records. The map shows the percentage of low birth-weight infants. Infants are considered low birth weight if they weigh less than 2,500 grams. Zip codes shown as white indicate that rates were not calculated as there were <20 births in a zip code.


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Map 49

Estimated Prevalence of Serious Emotional Disturbance and Serious Mental Illness (2008)

Estimated Prevalence of Serious Emotional Disturbance and Serious Mental Illness: The map shows the proportion of the population with a serious emotional disturbance (SED) in children and serious mental illness (SMI) in adults. The map is from the Los Angeles County Department of Mental Health for 2008.
Map 50
Mental Illness Hospitalization Rate per 100,000 Residents (2007-2010)

Legend
Mental Illness Hospitalization Rate (per 100,000 people)
- Less than 394.2
- 394.2 to 541.1
- 541.1 to 714
- Greater than 714
- Rate Not Calculated

Transportation Systems
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- Metro Liner Stations
- Metrolink Stations
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- State Highways

Jurisdictional Boundaries
- Community Plan Areas

Data was compiled from the California Office of Statewide Health Planning and Development (OSHPD). The map shows the hospitalization rate for patients with any schizophrenic, affective psychosis, neurotic disorder, or paranoid and senile state diagnosis per 100,000 people. Rates were based on the hospitalization data from 2007-2010, population from 2010, and shown in quartiles. Zip codes shown as white indicate that rates were not calculated as there were <= 5 hospitalizations.


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Health Professional Shortage Areas (2010)

Legend

Boundaries
- Primary Care Health Professional Shortage Areas
- Dental Health Professional Shortage Areas
- Mental Health Professional Shortage Areas
- Community Plan Areas

2010 Population Density
(parsons per square mile)
- Less than 500
- 500 to 5,000
- 5,000 to 10,000
- 10,000 to 20,000
- 20,000 to 30,000
- 30,000 to 50,000
- Greater than 50,000

Transportation Systems
- Metro Rail Stations
- Metro Liner Stations
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Health Professional Shortage Areas are designations given to areas that demonstrate a shortage of healthcare providers. This designation is based on a ratio of population to physicians and access to healthcare.


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