Orange County's
HEALTHIER TOGETHER

2013

Orange County Health Profile

A look at trends and disparities in key health indicators for Orange County

OC HEALTH

PUBLIC HEALTH SERVICES
Orange County Health Care Agency

County of Orange, Health Care Agency, Public Health Services. *Orange County Health Profile 2013.*
Copies of this report are available online at http://www.ochealthinfo.com/pubs

Table of Contents

Table of Contents

Table of Contents

Introduction

The *2013 Orange County Health Profile* shows key health indicators and social, economic, and environmental indicators that reflect or contribute to health in Orange County. In general, Orange County's health indicators fare well compared to other counties, and state and national data. However, there are often disparities in health conditions amongst groups of people based on economics, race, ethnicity, gender, age, and geography, which this report attempts to capture.

Indicators were selected for this report by a collaborative of local health planners based on the following criteria:

- **Leading health indicator:** Indicator contributes to a comprehensive picture of health of the community
- **Significant:** Indicator has impact on morbidity and mortality
- **Well aligned:** Indicator is most reflective of health issue
- **Comparable:** Indicator can be compared to those in state and national initiatives (e.g. County Health Rankings, Healthy People 2020) and trended over time
- **Relevant:** Indicator is meaningful to the community and of current interest
- **Useful to community and stakeholders:** Indicator meets the needs of community members and stakeholders
- **Actionable:** Indicator has potential to impact policy or service changes
- **Robust:** Sufficient data are available to allow indicator to be analyzed at the sub-county geographic and demographic level
- **Easy to understand:** Indicator is easily understood by community members and leaders

Indicators have been grouped into 13 general sections. Most indicators are presented on a two-page fact sheet, with trend, race/ethnicity, and age information on the first page and geographic information on the second page. The following two pages provide an overview of the format of each fact sheet.

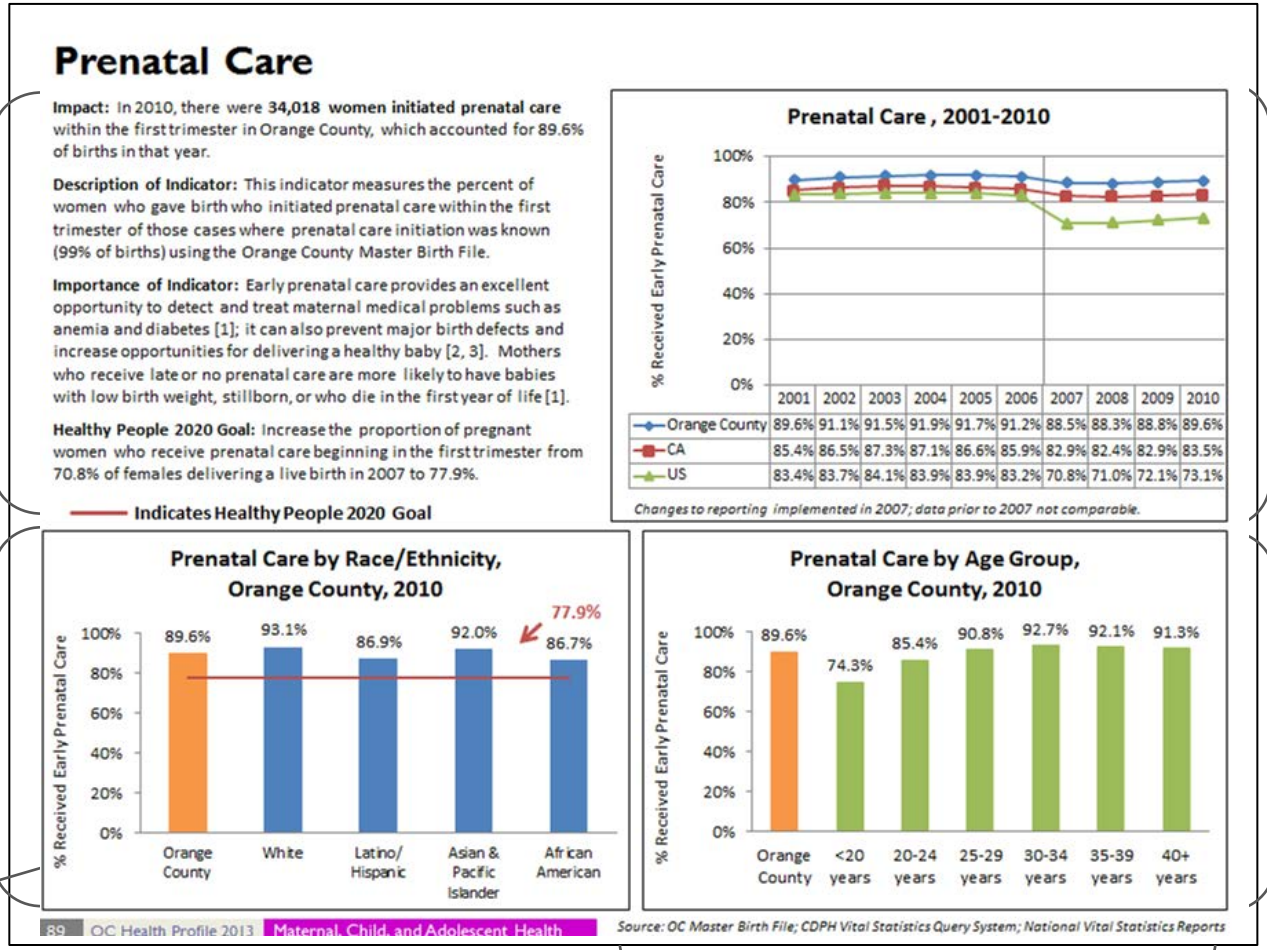
Acknowledgements

The *2013 Orange County Health Profile* was completed with the help of the Orange County Health Care Agency Community Health Indicator Work Group including: Bonnie Birnbaum, Amy Buch, Helene Calvet, Mike Carson, Jane Chai, Curtis Condon, Mary Davis, Denise Fennessy, Donna Fleming, Elisabeth Gonzalez, Travers Ichinose, Steve Klish, Rebecca Mares, David Núñez, Chip Pope, David Thiessen, and Matthew Zahn. Special acknowledgments go to Jane Chai, Curtis Condon, Travers Ichinose, Alaka Nafday, Yoon Nguyen, and Ryan Ramos, who assisted in writing and compiling large portions of this report.

Format of Fact Sheets - Page 1

Narrative description

- **Impact:** Number or percent of people impacted
- **Description:** What the indicator is measuring
- **Importance:** Why the indicator is important to health; references are provided at end of each chapter.
- Related **Healthy People 2020 Goal**



Prenatal Care

Impact: In 2010, there were **34,018 women initiated prenatal care** within the first trimester in Orange County, which accounted for 89.6% of births in that year.

Description of Indicator: This indicator measures the percent of women who gave birth who initiated prenatal care within the first trimester of those cases where prenatal care initiation was known (99% of births) using the Orange County Master Birth File.

Importance of Indicator: Early prenatal care provides an excellent opportunity to detect and treat maternal medical problems such as anemia and diabetes [1]; it can also prevent major birth defects and increase opportunities for delivering a healthy baby [2, 3]. Mothers who receive late or no prenatal care are more likely to have babies with low birth weight, stillborn, or who die in the first year of life [1].

Healthy People 2020 Goal: Increase the proportion of pregnant women who receive prenatal care beginning in the first trimester from 70.8% of females delivering a live birth in 2007 to 77.9%.

Indicates Healthy People 2020 Goal

Prenatal Care , 2001-2010

% Received Early Prenatal Care

	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	89.6%	91.1%	91.5%	91.9%	91.7%	91.2%	88.5%	88.3%	88.8%	89.6%
CA	85.4%	86.5%	87.3%	87.1%	86.6%	85.9%	82.9%	82.4%	82.9%	83.5%
US	83.4%	83.7%	84.1%	83.9%	83.9%	83.2%	70.8%	71.0%	72.1%	73.1%

Changes to reporting implemented in 2007; data prior to 2007 not comparable.

Prenatal Care by Race/Ethnicity, Orange County, 2010

% Received Early Prenatal Care

89.6% Orange County; 93.1% White; 86.9% Latino/ Hispanic; 92.0% Asian & Pacific Islander; 86.7% African American; 77.9%

Prenatal Care by Age Group, Orange County, 2010

% Received Early Prenatal Care

89.6% Orange County; 74.3% <20 years; 85.4% 20-24 years; 90.8% 25-29 years; 92.7% 30-34 years; 92.1% 35-39 years; 91.3% 40+ years

89 OC Health Profile 2013 Maternal, Child and Adolescent Health

Source: OC Master Birth File; CDPH Vital Statistics Query System; National Vital Statistics Reports

Trend over time of indicator in Orange County compared to California and the United States.

Comparison of indicator by **race/ethnicity** (and gender, when available).

Comparison of indicator by **age group**.

Healthy People 2020 Goal line, if available.

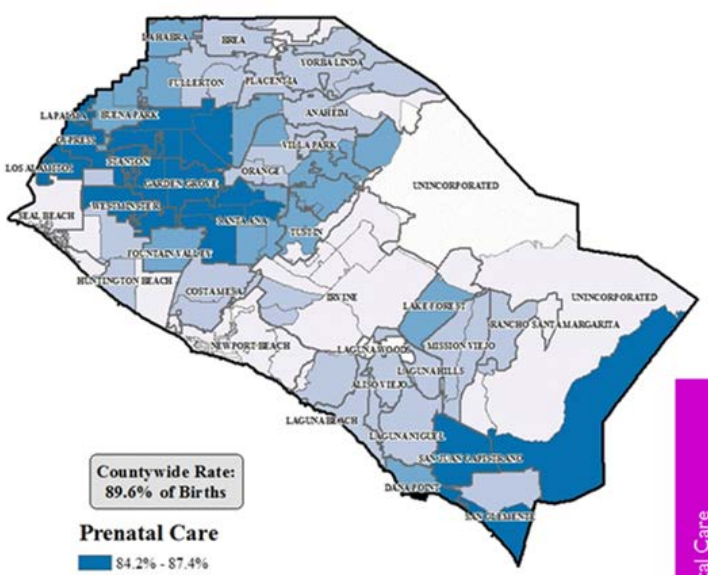
Page number and **chapter**.

Sources of data. If more than one data source, local, state, and national data are shown from left to right, respectively.

Format of Fact Sheets - Page 2

Indicator by **city or school district**. The tables have been sorted such that the lower the city/school district is on the table, the higher the level of need or worse the health outcome.

City	% Mothers Received Early Prenatal Care, 2010
Irvine	95.5%
Newport Beach	95.0%
Aliso Viejo	94.5%
Yorba Linda	94.0%
Seal Beach	94.0%
Brea	93.5%
Rancho Santa Margarita	93.5%
Laguna Beach	93.2%
Costa Mesa	92.8%
Huntington Beach	92.4%
Laguna Niguel	92.0%
Mission Viejo	91.4%
Placentia	91.1%
Tustin	90.9%
Fullerton	90.4%
Orange	90.0%
Fountain Valley	89.7%
Orange County	89.6%
Laguna Hills	89.3%
San Clemente	88.6%
Buena Park	88.3%
La Palma	88.2%
La Habra	87.8%
Lake Forest	87.6%
Dana Point	87.5%
Anaheim	87.5%
Santa Ana	86.9%
San Juan Capistrano	86.7%
Garden Grove	86.5%
Stanton	85.9%
Los Alamitos	85.8%
Villa Park	85.7%
Westminster	85.2%
Cypress	85.0%
California	83.9%
United States	80.5%
Laguna Woods	Estimate unstable



Map of indicator by finest level of geography available (city, school district, zip code, or census tract). Some maps combine additional years of data to enable a more specific geographical focus.
Map geographic level estimates are broken down into quartiles. The four levels have been shaded so that darker color correlates to higher need or a worse outcome.

Indicator name

Chapter

Note: Page 2 is only shown for indicators with available stable sub-county geographic detail.

This page intentionally left blank.

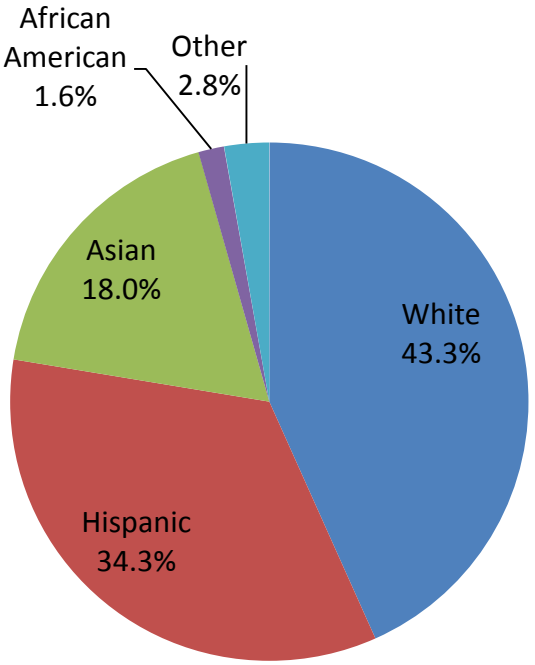
Demographic Profile

Orange County Population by Race/Ethnicity

Description: The following charts show the racial/ethnic distribution of Orange County's population in 2012 and the projected distributions in 2020 and 2030 according to the California Department of Finance. In 2012, Orange County's population was 43.3% White, 34.3% Hispanic, 18.0% Asian, 1.6% African-American, and 2.8% other. As shown, the county's population will become increasingly diverse over the next 20 years.

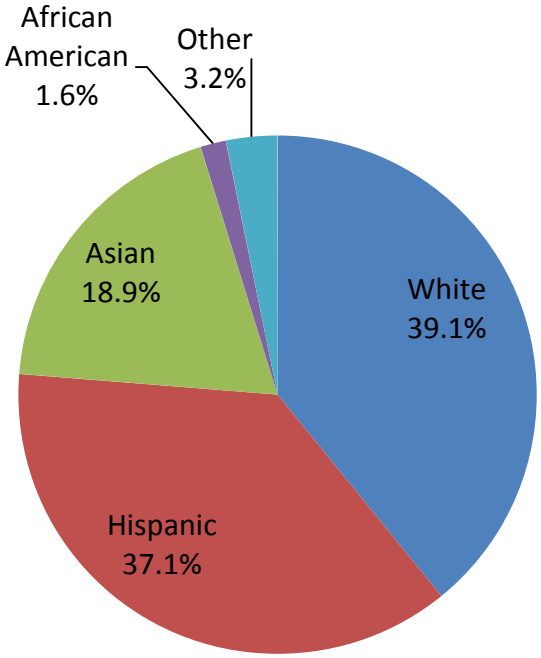
2012

Population = 3,071,933



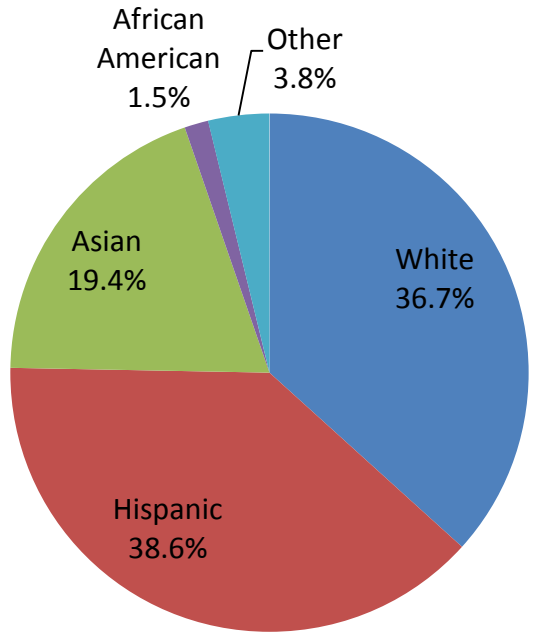
2020 (Projected)

Population = 3,198,279



2030 (Projected)

Population = 3,286,100



White | Latino/Hispanic | Asian | African American | Other

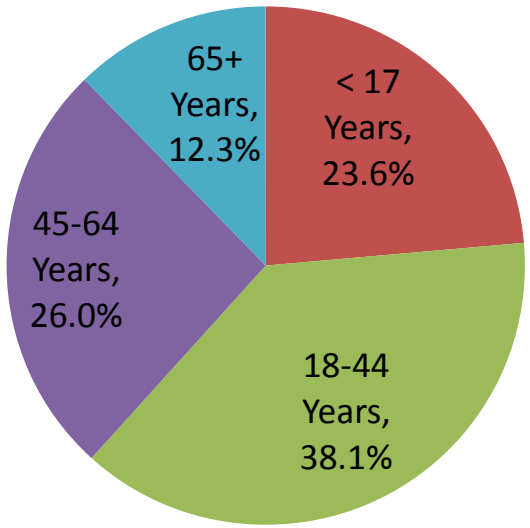
Source: California Department of Finance

Orange County Population by Age Group

Description: The following charts show the distribution of Orange County's population by age groups in 2012 and the projected distributions in 2020 and 2030 according to the California Department of Finance. In 2012, 23.6% of the county's population was under the age of 17, 38.1% were 18-44 years of age, 26.0% were 45-64 years of age, and 12.3% were 65 or older. As shown, increasing proportions of the county's population will be 65 or older over the next 20 years.

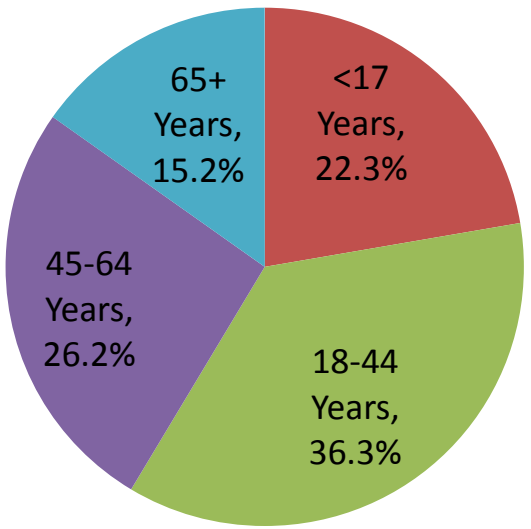
2012

Population = 3,071,933



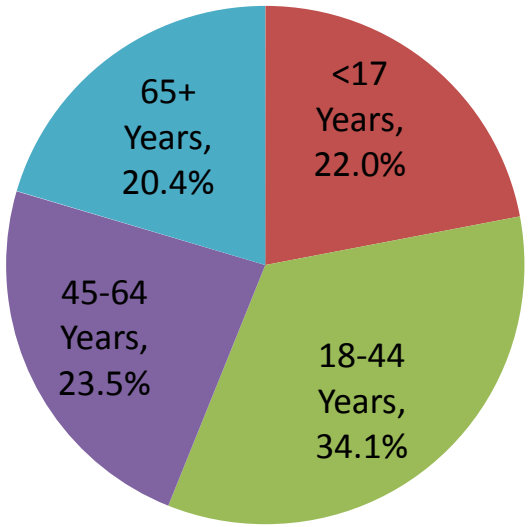
2020 (Projected)

Population = 3,198,279



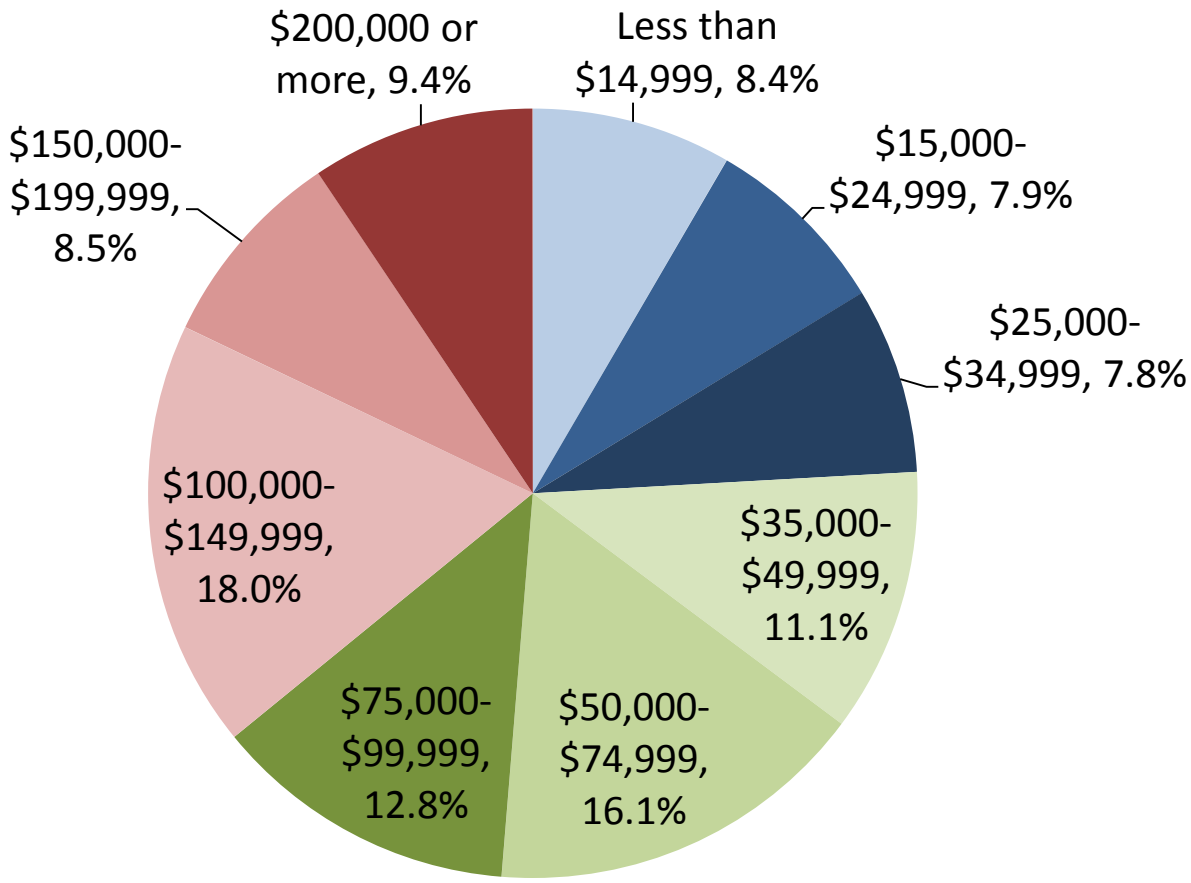
2030 (Projected)

Population = 3,286,100



Source: California Department of Finance

Orange County Households by Income, 2011



Total 2011 estimated households: 992,855

Description: This chart shows the distribution of the estimated 992,855 Orange County households by income in 2011 according to the U.S. Census Bureau's American Community Survey.

As shown:

- 24.1% of households earned $34,999 or less
- 40.0% of households earned between $35,000 and $99,999
- 35.9% households earned $100,000 or more

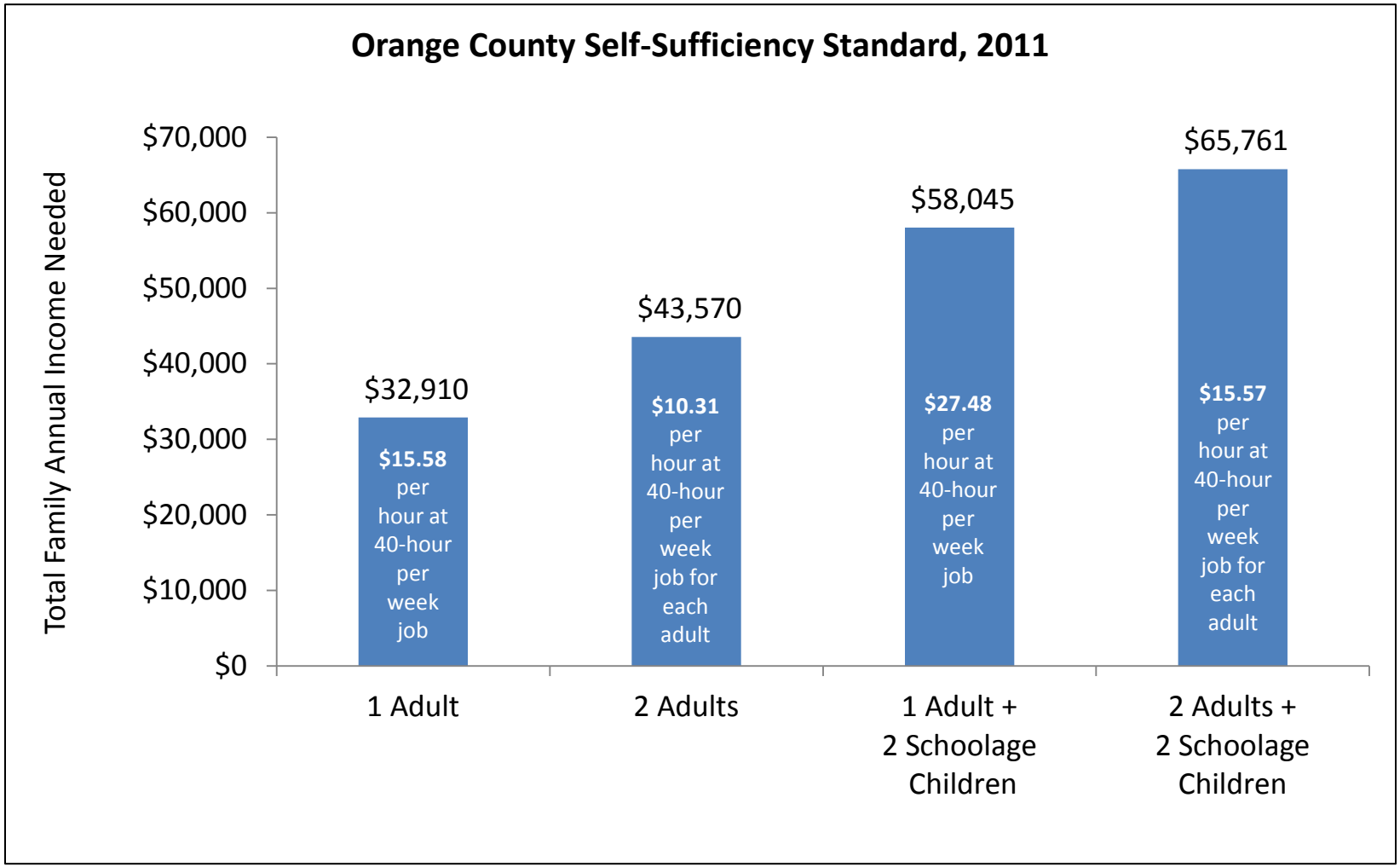
Other highlights:

- The median household income in Orange County in 2011 was $72,293 compared to $57,287 in California and $50,502 in the United States.

Source: US Census Bureau American Community Survey

Orange County Economic Self-Sufficiency Standard, 2011

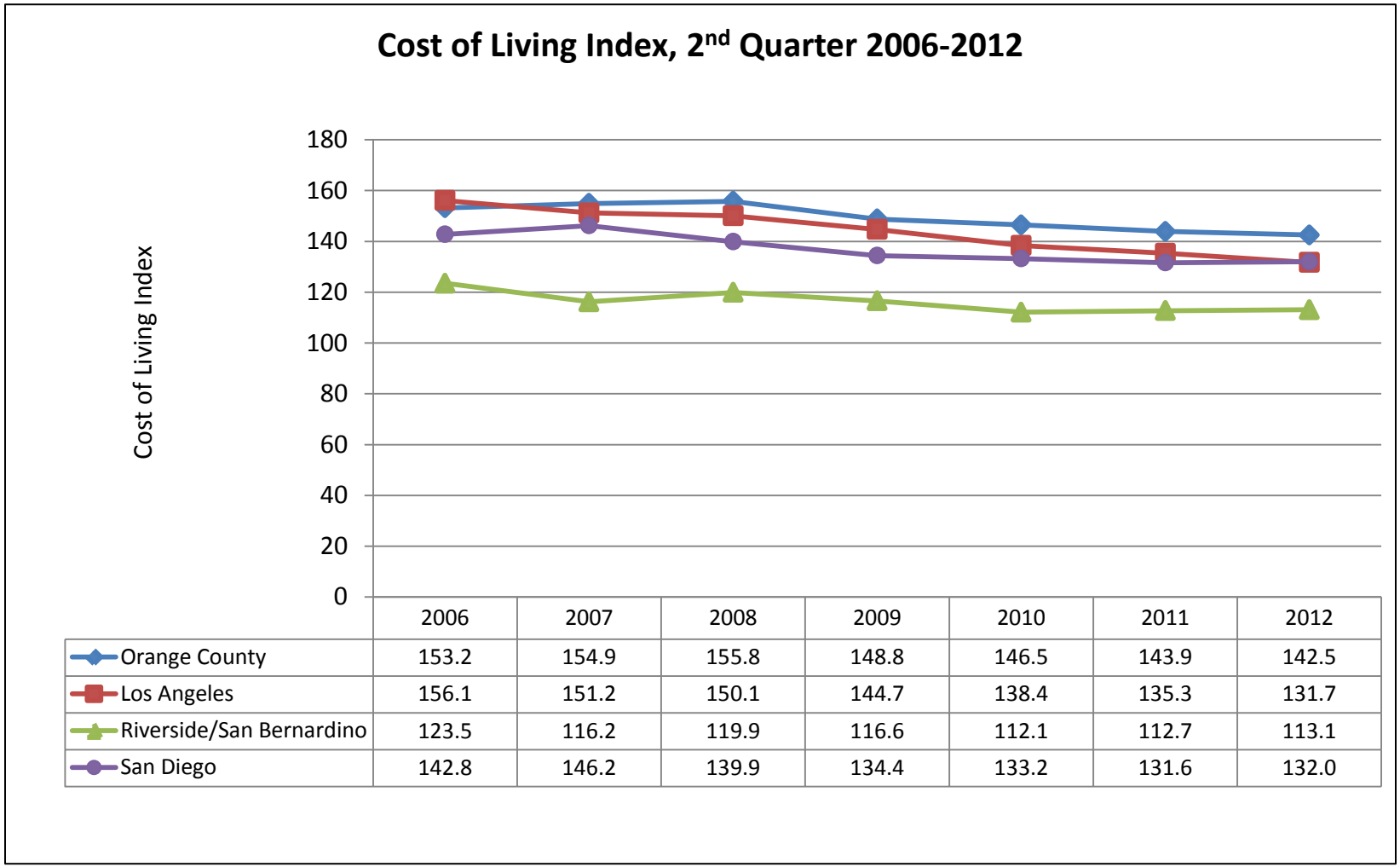
Description of Indicator: This Family Economic Self-Sufficiency Standard measures how much income is needed for a family of a certain size in a particular county to adequately meet its minimal basic needs including housing, child care, food, transportation, out-of-pocket medical expenses, taxes, and other necessary spending. The Standard also includes adjustments based on tax credits such as the earned income tax credit, child care tax credit, and child tax credit where applicable. In 2011, the Standard was calculated for 156 family types ranging from a single adult with no children to three or more adults with four or more children. The chart below shows the total family annual income needed for four family types and the hourly wage each adult must earn at a 40-hour per week job.



Source: Center for Community Economic Development

Cost of Living Index

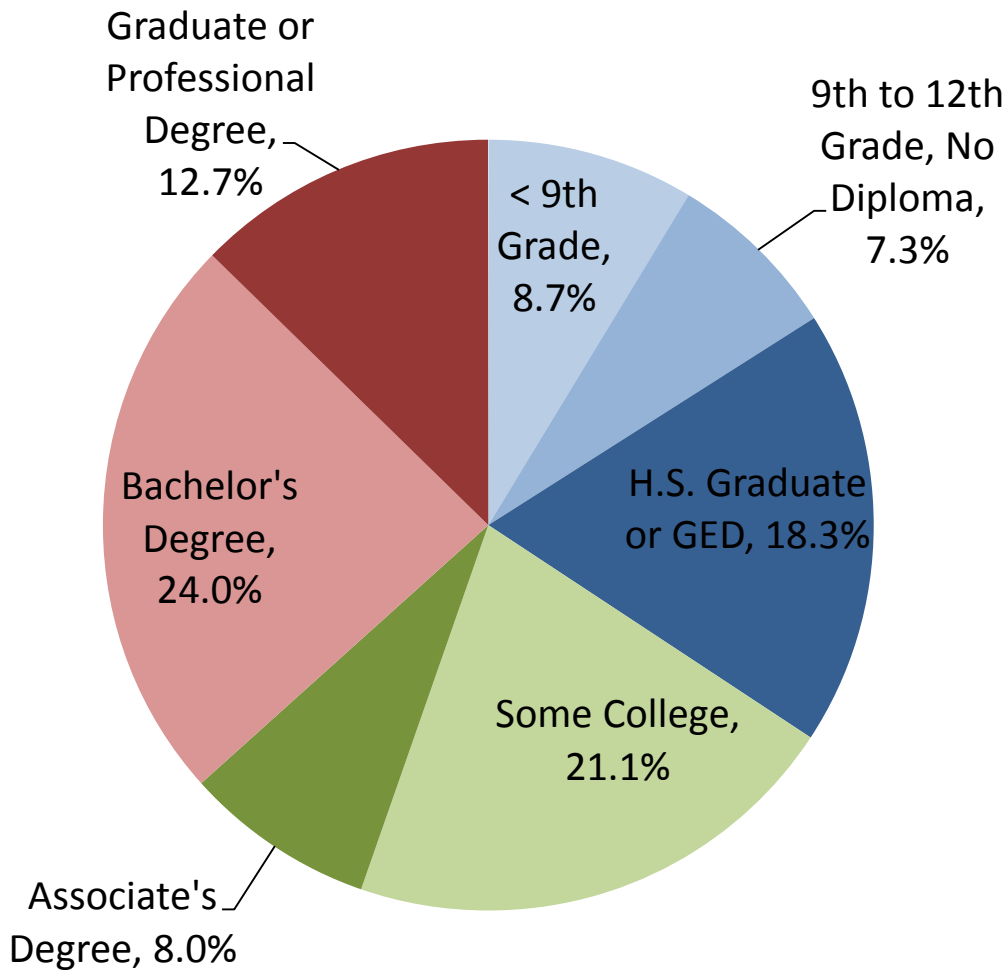
Description of Indicator: This Cost of Living Index compares prices of housing, groceries, utilities, transportation, health care, and other consumer items for Orange County and peer metropolitan regions as found by the Council for Community and Economic Research. The average index of all metro areas equals 100 and each area's individual index is read as a percentage of the average for all places. The chart below shows comparisons of Orange County's Cost of Living Index compared to neighboring areas in the southern California region. As shown, since 2007 Orange County has consistently had the highest Cost of Living Index compared to neighboring areas. Orange County's cost of living measures for groceries, utilities, transportation, and miscellaneous items tended to rank in the middle among similar jurisdictions, but high housing costs significantly affected the index, making Orange County's score among the highest.



	2006	2007	2008	2009	2010	2011	2012
Orange County	153.2	154.9	155.8	148.8	146.5	143.9	142.5
Los Angeles	156.1	151.2	150.1	144.7	138.4	135.3	131.7
Riverside/San Bernardino	123.5	116.2	119.9	116.6	112.1	112.7	113.1
San Diego	142.8	146.2	139.9	134.4	133.2	131.6	132.0

Source: Council for Community and Economic Research via Orange County Community Indicators Report

Orange County Residents by Educational Attainment, 2011



Total estimated 2011 population 25 years and older: 2,008,772

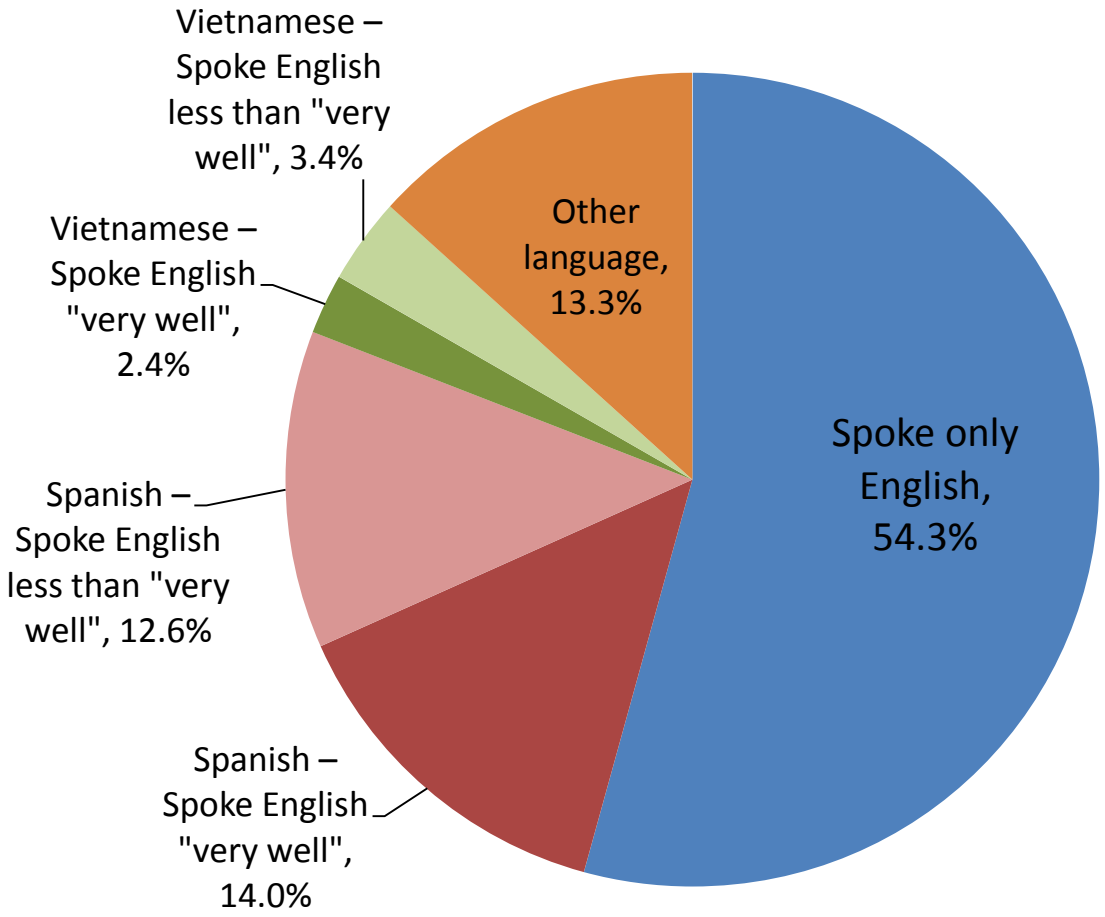
Description: This chart shows the distribution of the estimated 2,008,772 Orange County residents 25 years and older by educational attainment in 2011 according to the U.S. Census Bureau's American Community Survey.

As shown:

- 16% of residents 25 and older had less than a high school diploma
- 29.1% of residents 25 and older had some college education or an associate's degree
- 36.7% of residents 25 and older had a bachelor's degree or higher

Source: California Department of Education

Orange County Population by Language, 2011



Total 2011 estimated residents 5 and older: 2,862,379

Description: This chart shows the distribution of the estimated 2,862,379 Orange County residents 5 years and older by language spoken at home and ability to speak English in 2011 according to the U.S. Census Bureau's American Community Survey.

As shown:

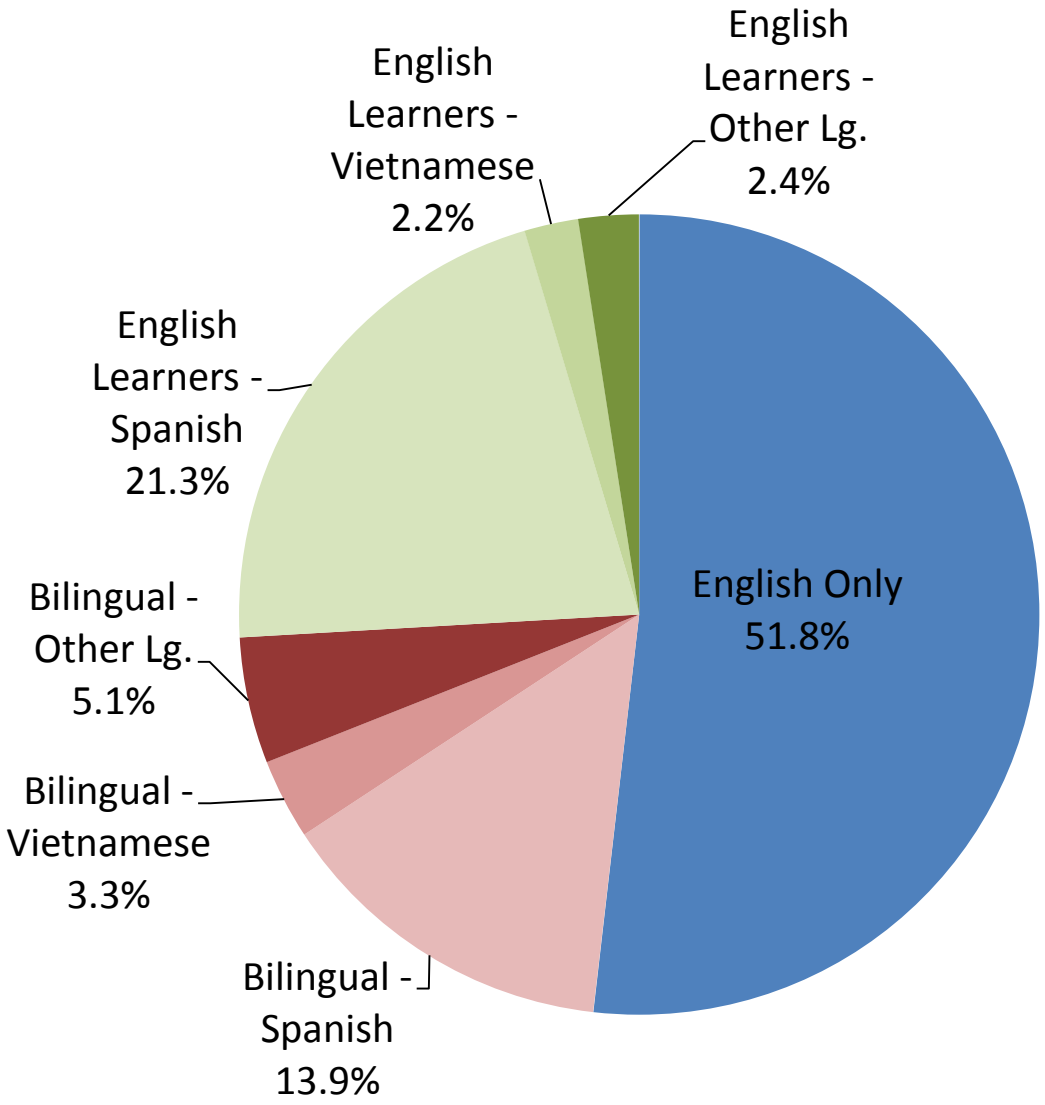
- 54.3% of residents 5 years and older spoke only English
- 26.6% of residents 5 years and older spoke Spanish at home; with 14.0% who spoke English "very well," and 12.6% who spoke English less than "very well"
- 5.8% of residents 5 years and older spoke Vietnamese at home; with 2.4% who spoke English "very well," and 3.4% who spoke English less than "very well"
- 13.3% of residents 5 years and older spoke a language other than English, Spanish, or Vietnamese at home

Other highlights:

- 21.2% of residents 5 years and older spoke a language other than English at home and spoke English less than "very well"

Source: US Census Bureau American Community Survey

Orange County Students by English Learners, 2012/13



Description: This charts shows the distribution of Orange County's 501,801 students in the 2012/13 school year by English Learner status according to the California Department of Education.

As shown:

- 51.8% of Orange County students spoke English only
- 22.2% of Orange County students were bilingual; 13.9% were bilingual in English and Spanish and 3.3% were bilingual in English and Vietnamese
- 25.9% of Orange County students were English learners; 21.3% were Spanish-speaking English learners and 2.2% were Vietnamese-speaking English learners
- 35.2% of students spoke Spanish as a primary or secondary language

Total 2012/13 student enrollment : 501,801

Source: California Department of Education

Orange County Population by City of Residence, 2013

City	2013 Population Estimate	% of County Population
Aliso Viejo	49,477	1.6%
Anaheim	346,161	11.2%
Brea	41,394	1.3%
Buena Park	81,953	2.7%
Costa Mesa	111,358	3.6%
Cypress	48,547	1.6%
Dana Point	33,863	1.1%
Fountain Valley	56,180	1.8%
Fullerton	138,251	4.5%
Garden Grove	173,075	5.6%
Huntington Beach	193,616	6.3%
Irvine	231,117	7.5%
Laguna Beach	23,105	0.7%
Laguna Hills	30,703	1.0%
Laguna Niguel	64,065	2.1%
Laguna Woods	16,500	0.5%
La Habra	61,202	2.0%
Lake Forest	78,501	2.5%
La Palma	15,818	0.5%
Los Alamitos	11,626	0.4%
Mission Viejo	94,824	3.1%
Newport Beach	86,436	2.8%
Orange	138,792	4.5%
Placentia	51,776	1.7%
Rancho Santa Margarita	48,550	1.6%
San Clemente	64,542	2.1%
San Juan Capistrano	35,321	1.1%
Santa Ana	329,915	10.7%
Seal Beach	24,487	0.8%
Stanton	38,764	1.3%
Tustin	77,983	2.5%
Villa Park	5,900	0.2%
Westminster	91,169	3.0%
Yorba Linda	66,437	2.2%
Balance of County	120,396	3.9%

Description: This table shows the population estimates of Orange County's estimated 3,081,804 residents by city as of January 1, 2013 according to the California Department of Finance.

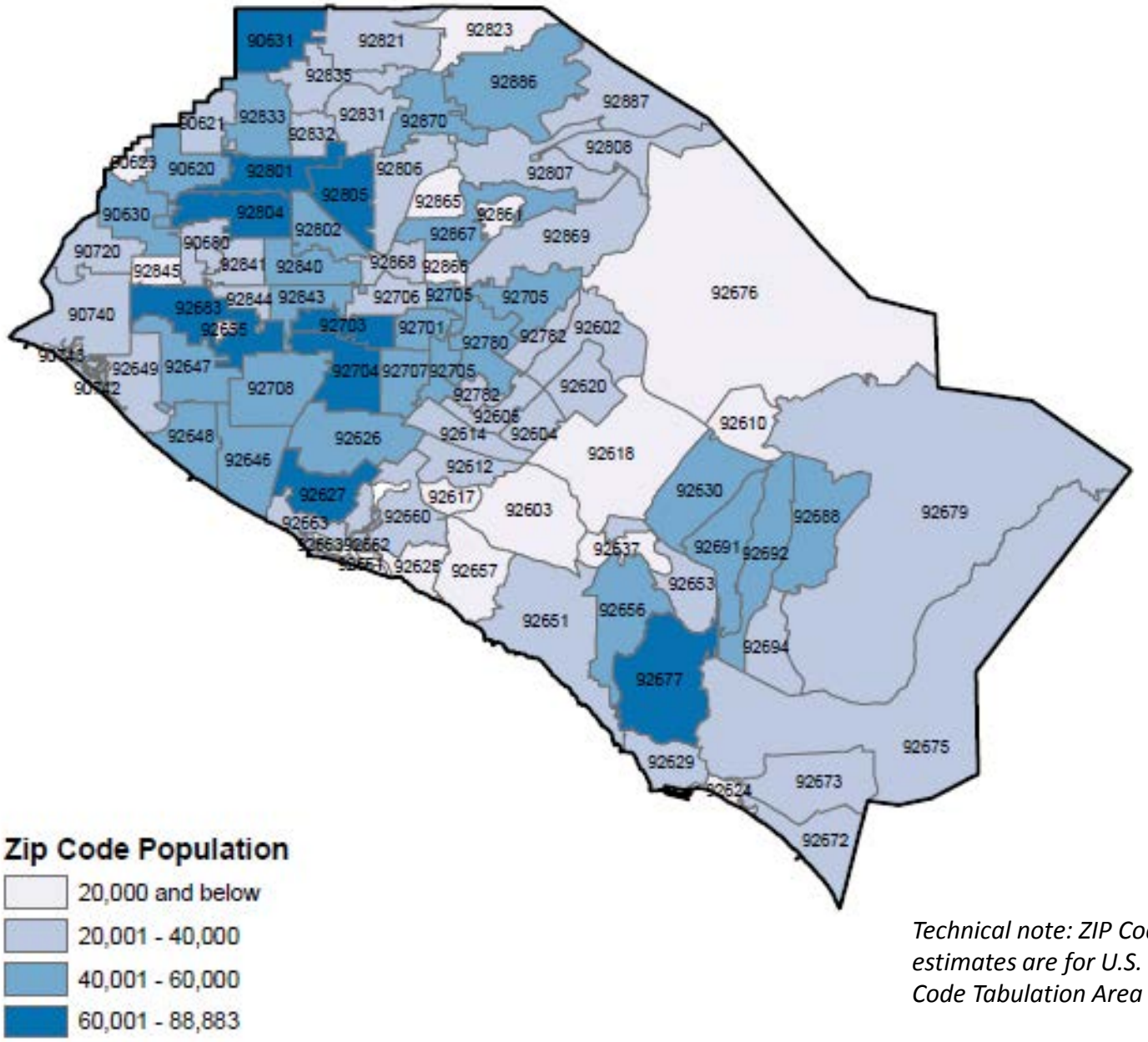
As shown:

- Anaheim was the most populous city with 346,161 estimated residents and 11.2% of the county's population
- Santa Ana was the 2nd most populous city with 329,915 estimated residents and 10.7% of the county's population
- Irvine was the 3rd most populous city with 231,117 residents and 7.5% of the county's population
- Huntington Beach was the 4th most populous city with 193,616 estimated residents and 6.3% of the county's population
- Garden Grove was the 5th most populous city with 173,075 estimated residents and 5.6% of the county's population

Technical Note: Population estimates shown here were not used as the population base to calculate rates throughout this report. Population estimates used in this report varied based on the year and type of data presented.

Source: California Department of Finance

Orange County Population by ZIP Code of Residence, 2010



Technical note: ZIP Code population estimates are for U.S. Census Bureau ZIP Code Tabulation Area (ZCTA).

Source: US Census 2010 SF1

This page intentionally left blank.

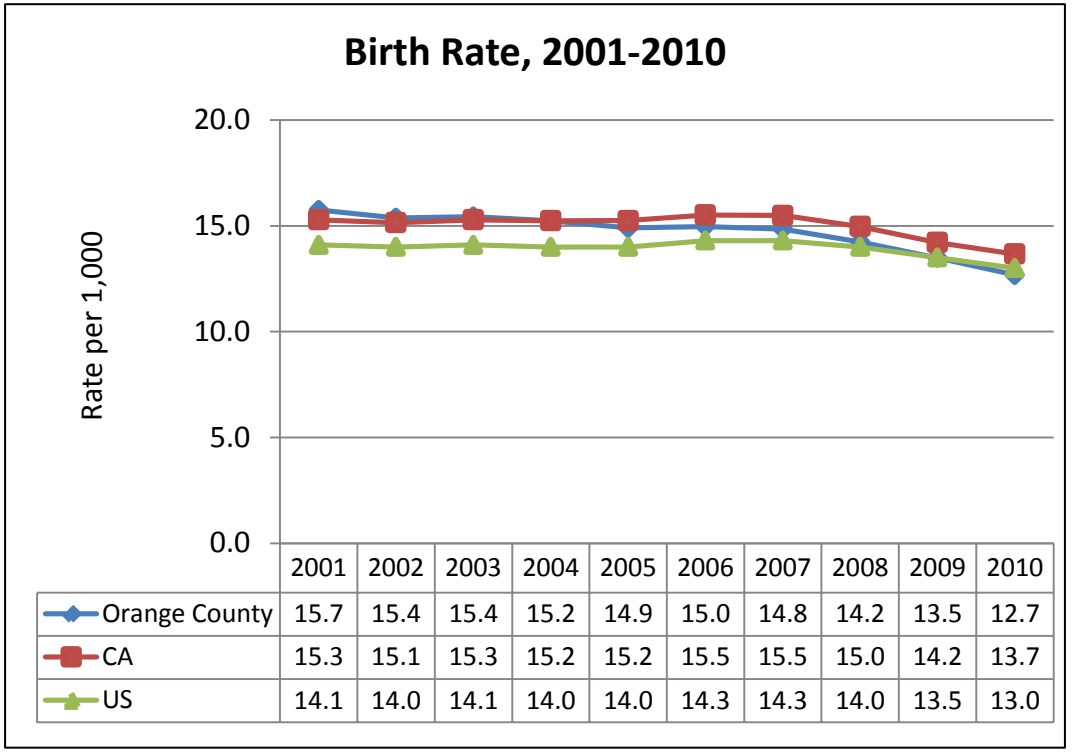
Summary Measures of Health

Birth Rate

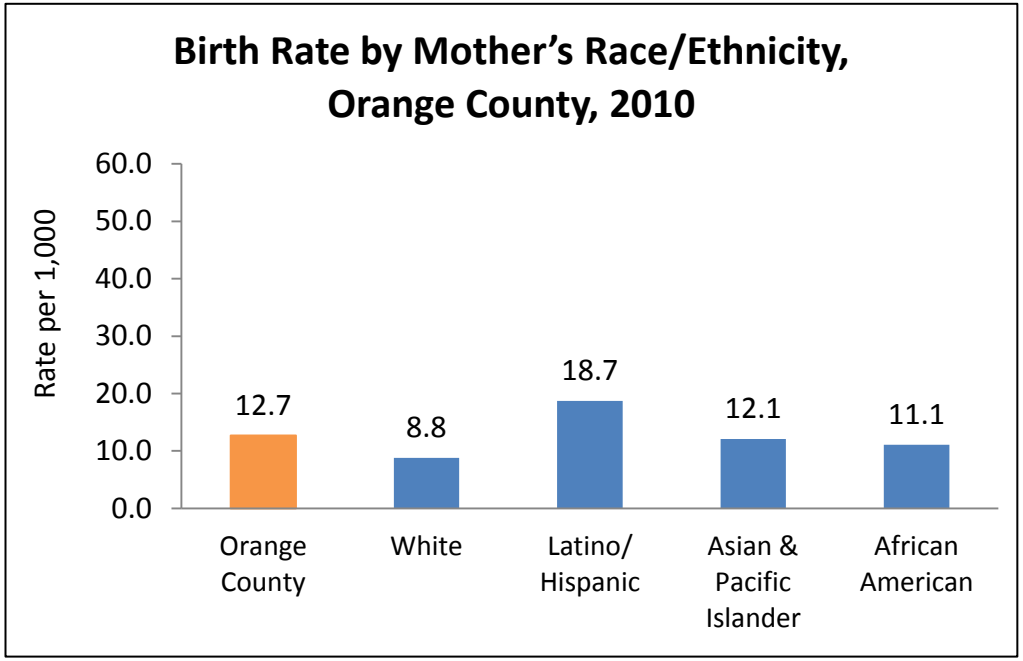
Description of Indicator: This indicator measures the rate of births per 1,000 population using the Orange County Master Birth File.

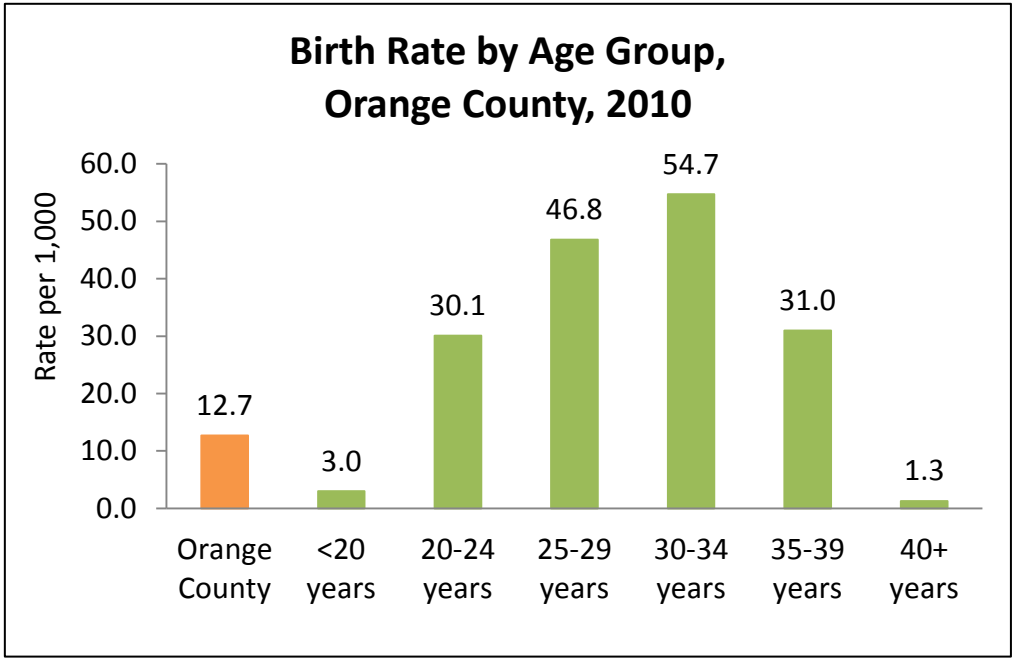
Summary: In 2010, there were **38,237 births** in Orange County, for a rate of 12.7 per 1,000 population. The following is the summary of births in 2010 by mother's race/ethnicity:

Race/Ethnicity	Number of Births
White	11,711
Latino/Hispanic	18,930
Asian & Pacific Islander	6,551
African American	489
Other/Unknown	556



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	15.7	15.4	15.4	15.2	14.9	15.0	14.8	14.2	13.5	12.7
CA	15.3	15.1	15.3	15.2	15.2	15.5	15.5	15.0	14.2	13.7
US	14.1	14.0	14.1	14.0	14.0	14.3	14.3	14.0	13.5	13.0

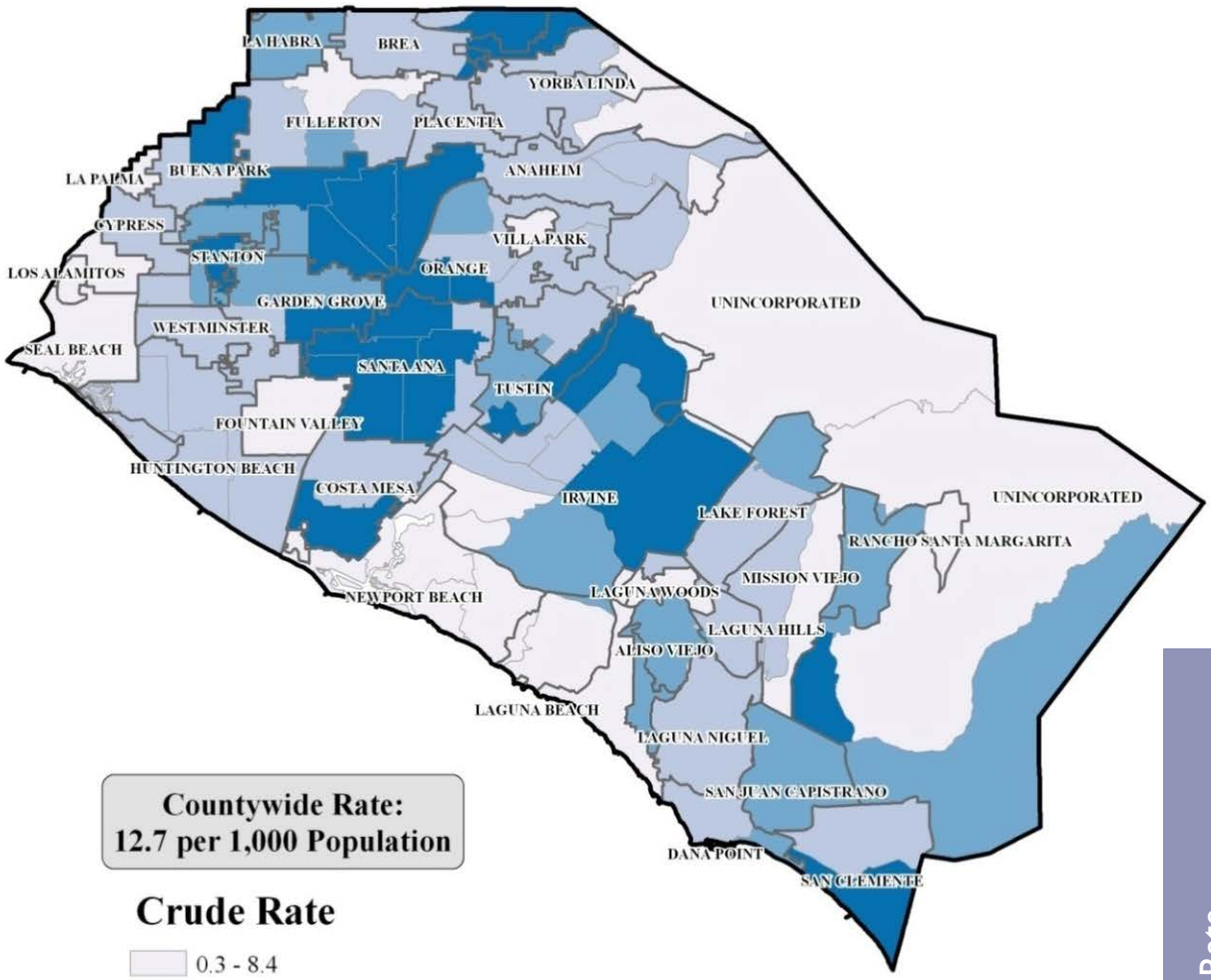




Sources: OC Master Birth File; CDPH Vital Statistics Query System; CDC Nat'l Vital Statistics Reports

City	Birth Rate per 1,000, 2010
Laguna Woods	0.3
Villa Park	4.5
Seal Beach	5.2
Laguna Beach	7.2
Newport Beach	7.5
Fountain Valley	7.9
La Palma	8.6
Yorba Linda	8.7
Lake Forest	8.7
Cypress	9.0
Mission Viejo	9.2
Laguna Niguel	9.4
Dana Point	9.6
Laguna Hills	9.8
Huntington Beach	10.3
Westminster	10.7
Fullerton	11.2
Brea	11.5
Irvine	11.7
Rancho Santa Margarita	12.0
Placentia	12.6
Stanton	12.6
Orange County	12.7
Buena Park	13.0
United States	13
San Juan Capistrano	13.1
Los Alamitos	13.4
Garden Grove	13.7
California	13.7
Orange	13.9
Costa Mesa	14.2
La Habra	14.4
Aliso Viejo	15.0
Tustin	15.6
San Clemente	15.6
Anaheim	16.3
Santa Ana	19.2

Orange County Crude Birth Rate (2010)
Rate per 1,000 Population



Source: 2010 Orange County Statistical Master Birth File

Health Status

Impact: In 2010, **84.5% of adults** in Orange County reported that their health was good, very good, or excellent.

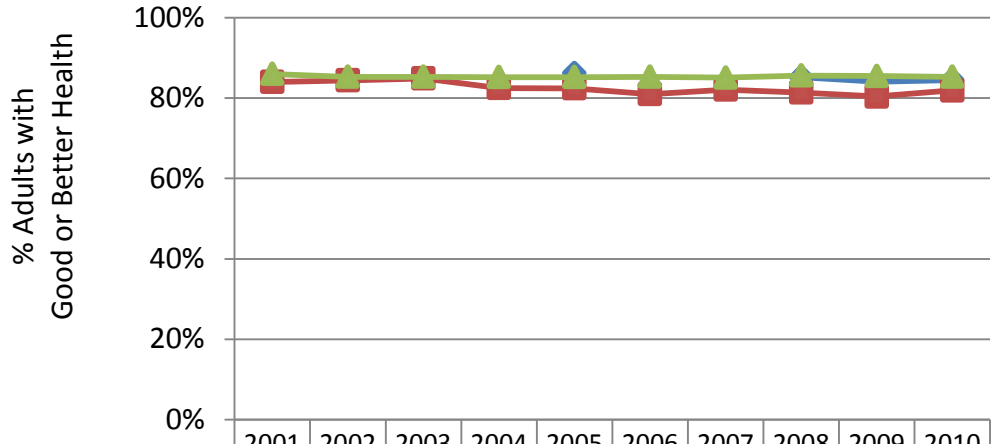
Description of Indicator: This indicator measures the proportion of adults who report their health as good or better through the Behavioral Risk Factor Surveillance Survey.

Importance of Indicator: Self-rated health is a common measure of general health, widely used because it is relatively easy to collect, though there is debate how well it reflects actual health status [1]. Regardless, studies have suggested self-rated health predicts future disability status [2], mortality risk at 10 year follow up [3], and is associated with medically assessed disease prevalence and laboratory measured medical markers [4].

Healthy People 2020 Goal: Not comparable with data shown.

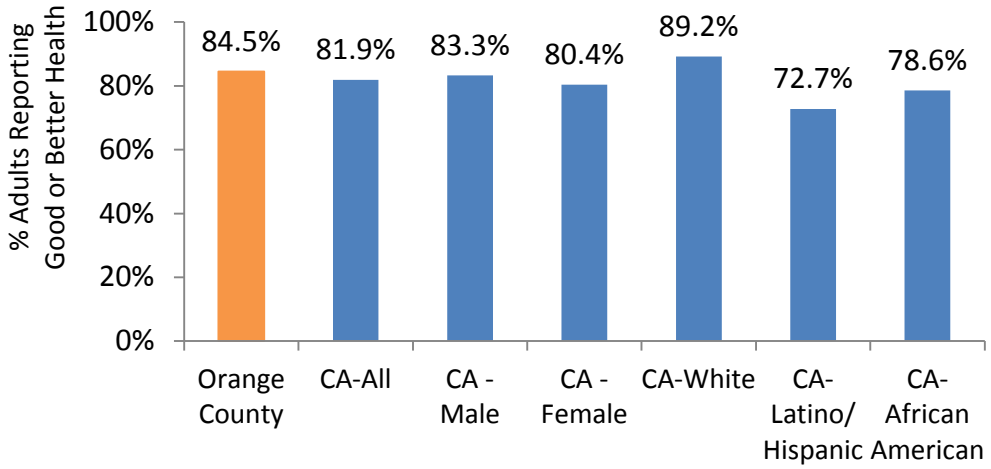
Technical Note: *California rates shown for comparison of race/ethnicity and age-group because Orange County estimates were unstable. Sub-county geographic detail is not available.*

Health Status, 2001-2010

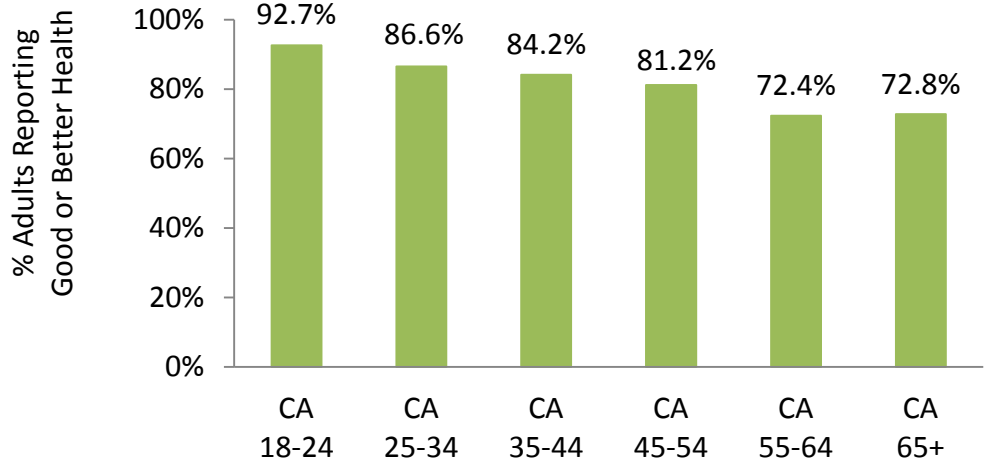


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County					86.2%			85.2%	84.1%	84.5%
CA	84.0%	84.4%	84.9%	82.5%	82.4%	81.0%	82.1%	81.4%	80.4%	81.9%
US	86.0%	85.3%	85.3%	85.2%	85.2%	85.3%	85.1%	85.6%	85.5%	85.3%

Health Status by Gender and by Race/Ethnicity, California, 2010



Health Status by Age Group, California, 2010



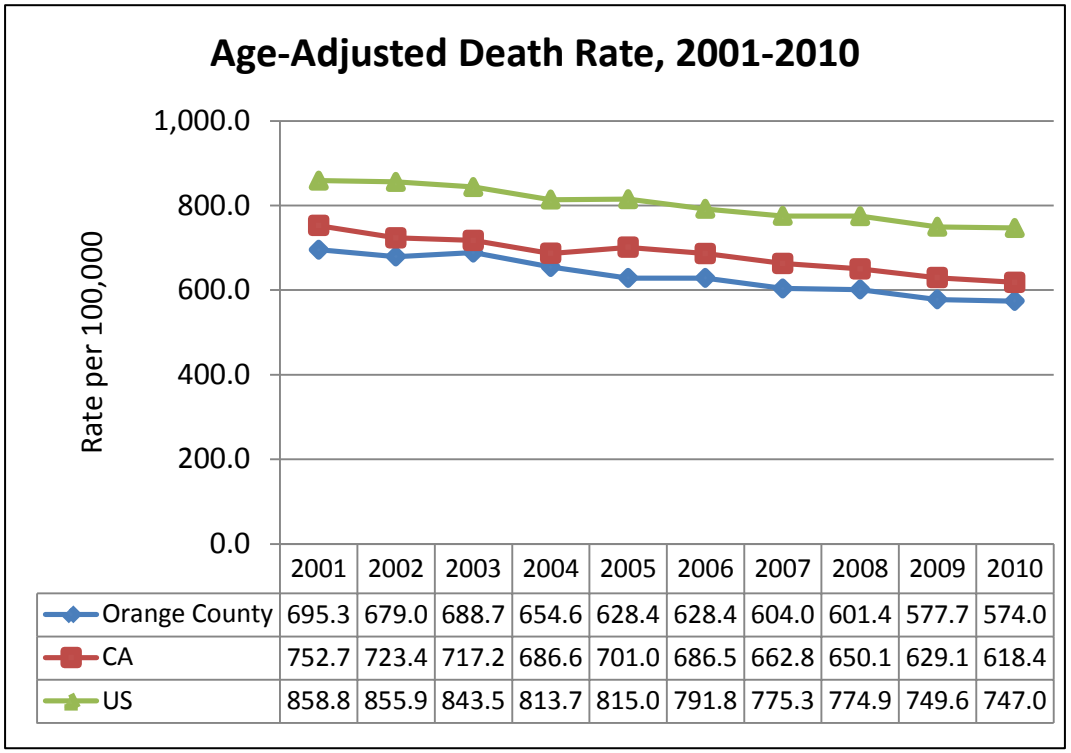
Source: Behavioral Risk Factor Surveillance Survey

Age-Adjusted Death Rate

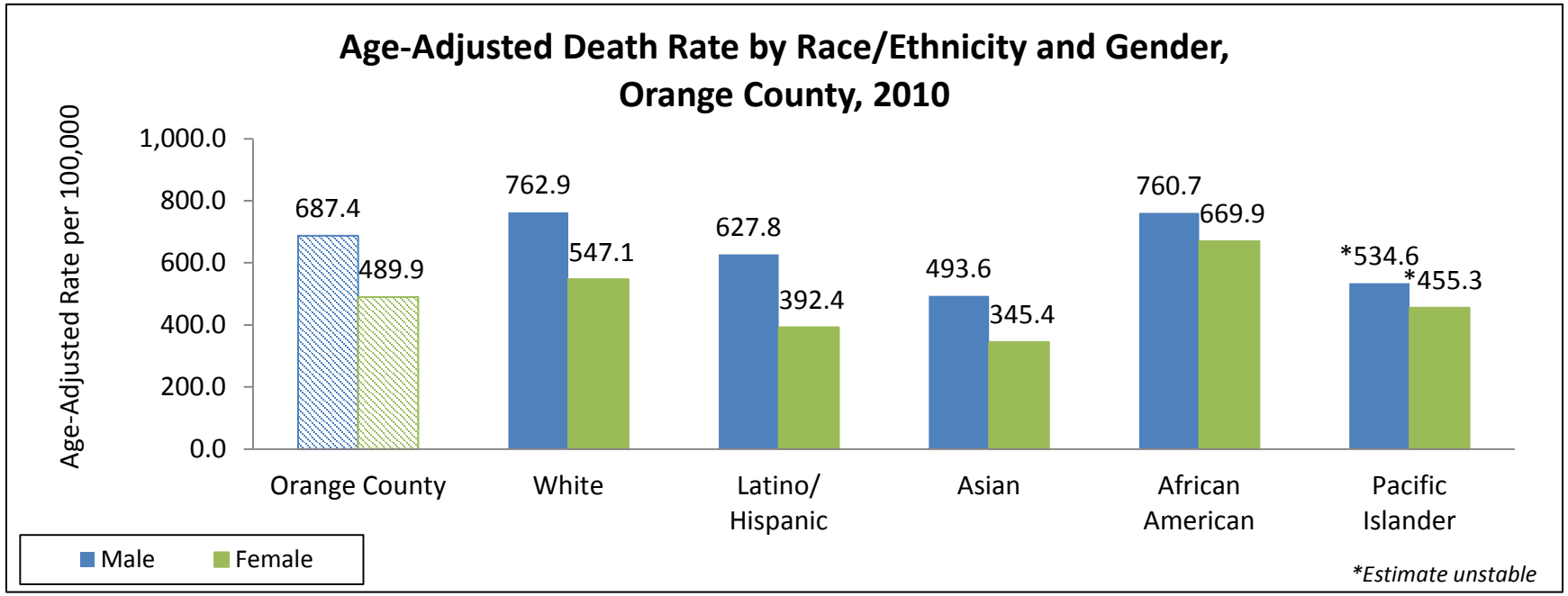
Description of Indicator: This indicator measures the rate of deaths per 100,000 population adjusted for age using the Orange County Master Death File.

Summary: In 2010, there were **17,182 deaths** in Orange County, for an age-adjusted rate of 574.0 per 100,000 population. The following is the summary of deaths in 2010 by race/ethnicity and gender:

Race/Ethnicity	Male Deaths	Female Deaths	Total Deaths
White	6,093	6,591	12,684
Latino/Hispanic	1,232	998	2,230
Asian	973	884	1,857
African American	122	100	222
Pacific Islander	22	20	42
Other/Unknown	75	72	147



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	695.3	679.0	688.7	654.6	628.4	628.4	604.0	601.4	577.7	574.0
CA	752.7	723.4	717.2	686.6	701.0	686.5	662.8	650.1	629.1	618.4
US	858.8	855.9	843.5	813.7	815.0	791.8	775.3	774.9	749.6	747.0



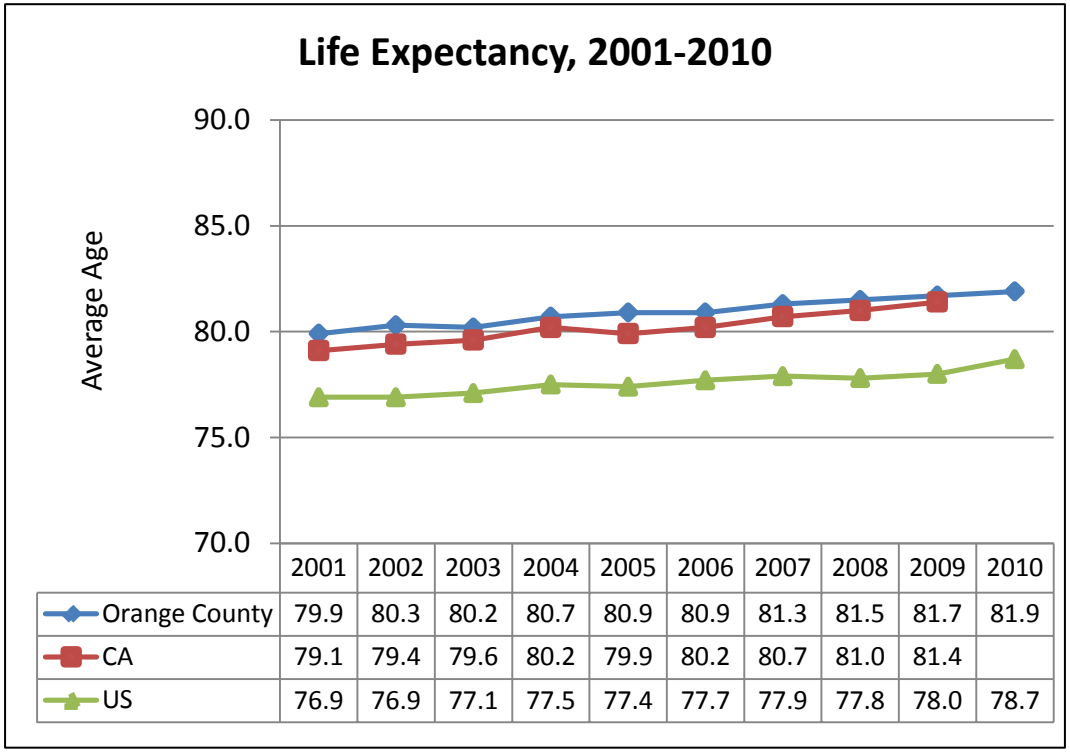
Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

Life Expectancy

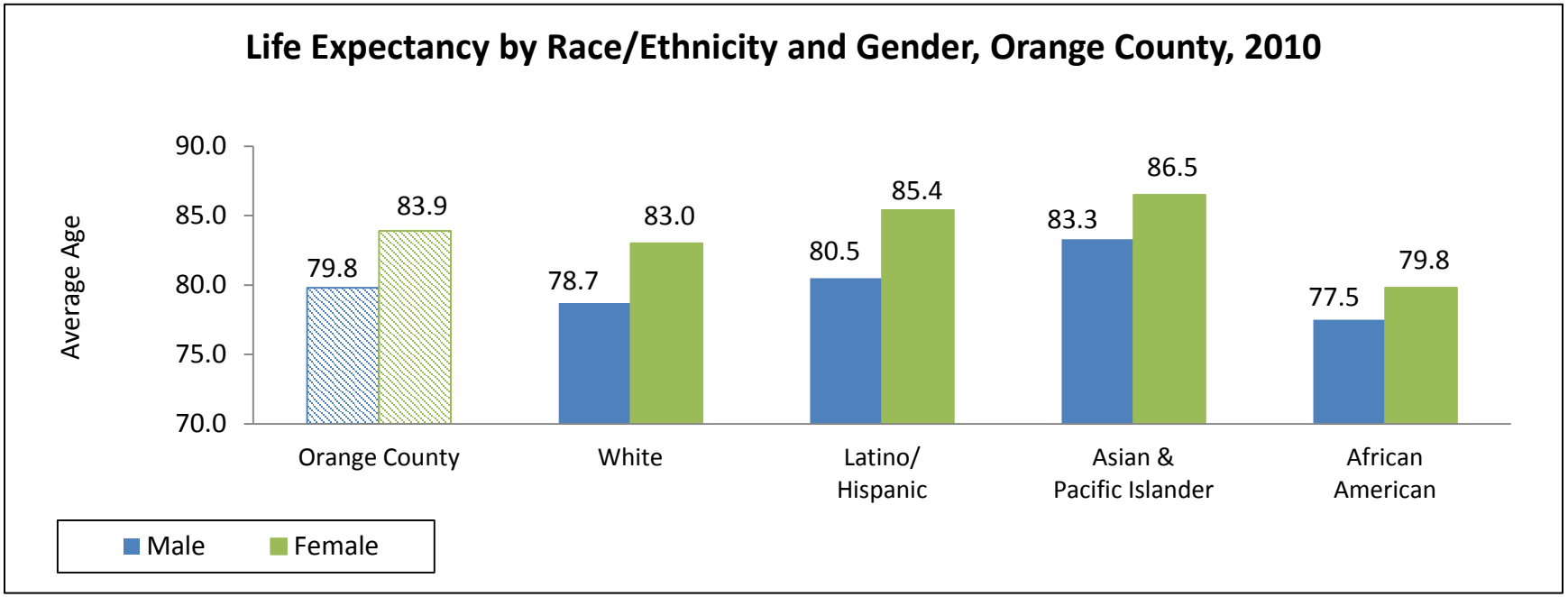
Impact: The average life expectancy at birth of an Orange County resident in 2010 is **81.9 years** (79.8 years for males and 83.9 years for females). Thus, the average Orange County resident born in 2010 can expect to live about 82 years.

Description of Indicator: Life expectancy at birth indicates the average number of years a newborn infant would live if prevailing patterns of mortality at the time of its birth were to stay the same throughout its life.

Importance of Indicator: Average life expectancy at birth is one of the most fundamental measures of the overall health of a community. With advances in medical care and efforts to improve public health, life expectancy has increased by as much as 30 years over the past century in the United States [5]. However, notable disparities persist for different racial and ethnic groups.

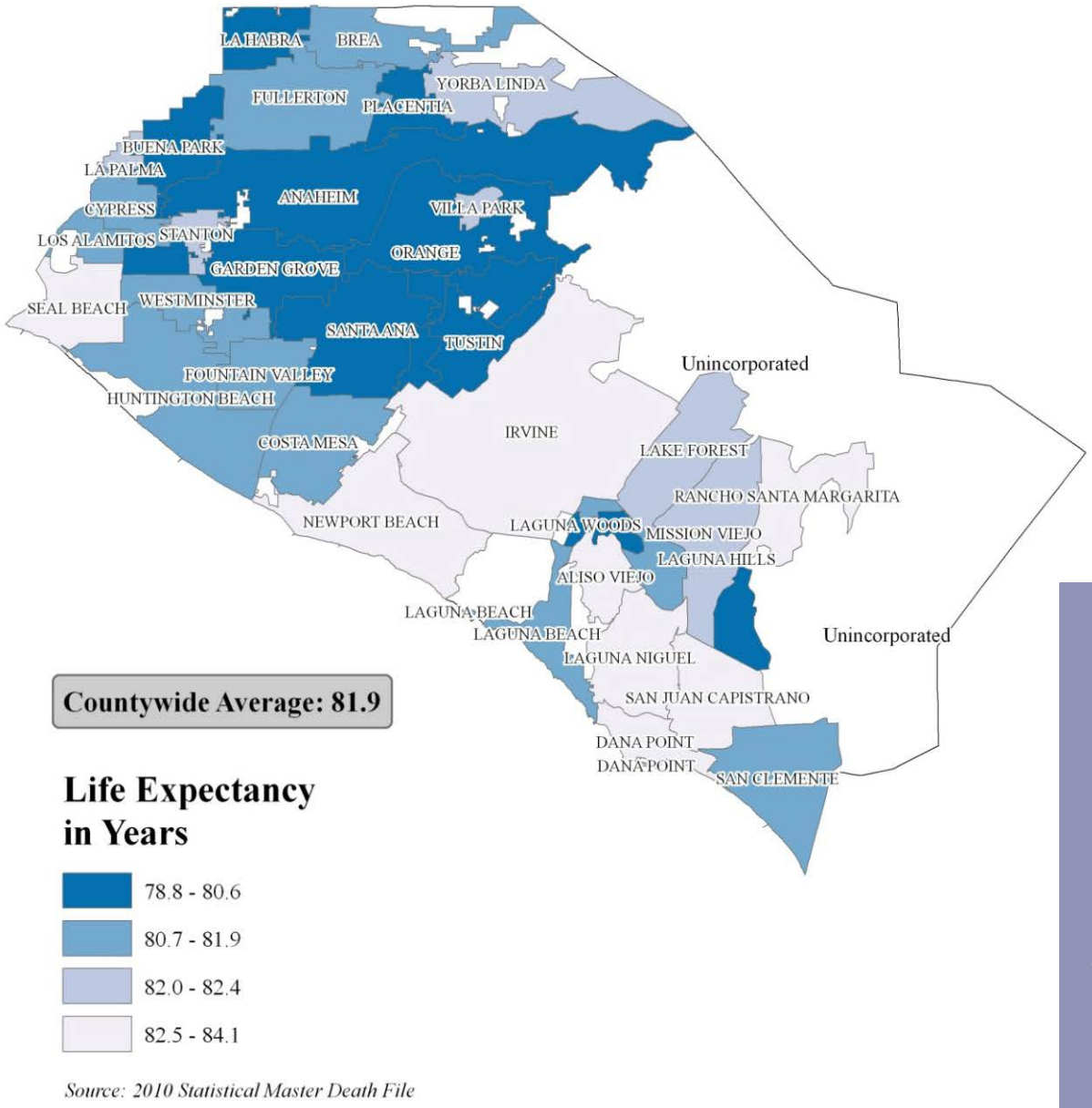


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	79.9	80.3	80.2	80.7	80.9	80.9	81.3	81.5	81.7	81.9
CA	79.1	79.4	79.6	80.2	79.9	80.2	80.7	81.0	81.4	
US	76.9	76.9	77.1	77.5	77.4	77.7	77.9	77.8	78.0	78.7



Source: OC Master Death File; California Master Death File; US Census Bureau

City	Average Life Expectancy at Birth, 2010
Ladera Ranch	84.5
Aliso Viejo	84.0
Irvine	83.9
Newport Beach	83.5
Seal Beach	83.3
Rancho Santa Margarita	83.2
Laguna Niguel	83.1
San Juan Capistrano	82.7
Dana Point	82.6
Lake Forest	82.3
Yorba Linda	82.3
Mission Viejo	82.3
Stanton	82.2
Orange County	81.9
Westminster	81.8
California (2009)	81.4
Laguna Hills	81.4
San Clemente	81.4
Brea	81.3
Cypress	81.3
Fountain Valley	81.1
Los Alamitos	80.9
Costa Mesa	80.9
Laguna Beach	80.8
Huntington Beach	80.8
Fullerton	80.7
Garden Grove	80.6
Placentia	80.5
Anaheim	80.2
La Habra	80.2
Tustin	80.1
Buena Park	80.0
Santa Ana	79.7
Orange	79.4
United States (2009)	78.7
La Palma	Estimate unstable
Laguna Woods	Estimate unstable
Villa Park	Estimate unstable



Leading Causes of Death, 2010

Orange County's Leading Causes of Death	Number of Deaths	Crude Rate per 100,000
1. Heart disease	4,354	144.6
2. Cancer (malignant neoplasms)	4,340	144.2
3. Cerebrovascular diseases	1,057	35.1
4. Alzheimer's disease	1,000	33.2
5. Chronic lower respiratory diseases	918	30.5
6. Accidents (unintentional injuries)	607	20.2
7. Influenza and pneumonia	516	17.1
8. Diabetes mellitus	443	14.7
9. Chronic liver disease and cirrhosis	293	9.7
10. Intentional self-harm (suicide)	279	9.3

Source: Orange County Master Death File

Leading Causes of Death by Gender, 2010

Leading Causes of Death among Men	Number of Deaths	Crude Rate per 100,000 Male Population
1. Heart disease	2,238	150.3
2. Cancer (malignant neoplasms)	2,228	149.7
3. Cerebrovascular diseases	423	28.4
4. Accidents (unintentional injuries)	402	27.0
5. Chronic lower respiratory diseases	379	25.5
6. Alzheimer's disease	308	20.7
7. Diabetes mellitus	243	16.3
8. Influenza and pneumonia	229	15.4
9. Intentional self-harm (suicide)	210	14.1
10. Chronic liver disease and cirrhosis	187	12.6

Leading Causes of Death among Women	Number of Deaths	Crude Rate per 100,000 Female Population
1. Heart disease	2,116	139.1
2. Cancer (malignant neoplasms)	2,112	138.8
3. Alzheimer's disease	692	45.5
4. Cerebrovascular diseases	634	41.7
5. Chronic lower respiratory diseases	539	35.4
6. Influenza and pneumonia	287	18.9
7. Accidents (unintentional injuries)	205	13.5
8. Diabetes mellitus	200	13.1
9. Essential hypertension and hypertensive renal disease	124	8.2
10. Nephritis, nephrotic syndrome, and nephrosis	122	8.0

Source: Orange County Master Death File

Leading Causes of Death by Race/Ethnicity, 2010

Leading Causes of Death among Whites	Number of Deaths	Crude Rate per 100,000 White Population
1. Heart disease	3,384	254.7
2. Cancer (malignant neoplasms)	3,143	236.6
3. Alzheimer's disease	832	62.6
4. Chronic lower respiratory diseases	802	60.4
5. Cerebrovascular diseases	765	57.6
6. Accidents (unintentional injuries)	411	30.9
7. Influenza and pneumonia	383	28.8
8. Diabetes mellitus	256	19.3
9. Intentional self-harm (suicide)	203	15.3
10. Chronic liver disease and cirrhosis	178	13.4

Leading Causes of Death among Latinos/Hispanics	Number of Deaths	Crude Rate per 100,000 Hispanic Population
1. Cancer (malignant neoplasms)	540	53.3
2. Heart disease	460	45.4
3. Cerebrovascular diseases	124	12.2
4. Accidents (unintentional injuries)	119	11.7
5. Diabetes mellitus	113	11.2
6. Chronic liver disease and cirrhosis	92	9.1
7. Alzheimer's disease	85	8.4
8. Nephritis, nephrotic syndrome, and nephrosis	52	5.1
9. Influenza and pneumonia	48	4.7
10. Certain conditions originating in the perinatal period	42	4.1

Source: Orange County Master Death File

Leading Causes of Death by Race/Ethnicity (cont.), 2010

Leading Causes of Death among Asians and Pacific Islanders (APIs)	Number of Deaths	Crude Rate per 100,000 API Population
1. Cancer (malignant neoplasms)	563	104.1
2. Heart disease	427	79.0
3. Cerebrovascular diseases	145	26.8
4. Influenza and pneumonia	78	14.4
5. Alzheimer's disease	75	13.9
6. Diabetes mellitus	67	12.4
7. Chronic lower respiratory diseases	59	10.9
8. Accidents (unintentional injuries)	59	10.9
9. Nephritis, nephrotic syndrome, and nephrosis	38	7.0
10. Intentional self-harm (suicide)	33	6.1

Leading Causes of Death among African Americans	Number of Deaths	Crude Rate per 100,000 African-American Population
1. Cancer (malignant neoplasms)	60	136.4
2. Heart disease	51	115.9
3. Cerebrovascular diseases	16	36.4*
4. Chronic lower respiratory diseases	12	27.3*
5. Nephritis, nephrotic syndrome and nephrosis	9	20.5*

*Rates shown may be unstable due to small numbers. Estimates for the next leading causes are unreliable and not shown.

Source: Orange County Master Death File

Leading Causes of Death by Age Group, 2010

Leading Causes of Death among Infants Under 1 Year	Number of Deaths	Rate per 100,000 Population in the Age Group
1. Sudden Infant Death Syndrome (SIDS) and other unspecified causes	47	122.9
2. Congenital anomalies	41	107.2
3. Maternal complications during pregnancies	19	49.7*
4. Short gestational period/low birth weight	8	20.9*

Leading Causes of Death among Ages 1-17 Years	Number of Deaths	Rate per 100,000 Population in the Age Group
1. Accidents (unintentional injuries)	21	3.0*
2. Cancer (malignant neoplasms)	12	1.7*
3. Congenital malformations, deformations and chromosomal abnormalities	10	1.4*
4. Intentional self-harm (suicide)	7	1.0*
5. Homicide deaths	6	0.9*

*Rates shown may be unstable due to small numbers. Estimates for the next leading causes are unreliable and not shown.

Leading Causes of Death among Ages 18-44 Years	Number of Deaths	Rate per 100,000 Population in the Age Group
1. Accidents (unintentional injuries)	199	17.2
2. Cancer (malignant neoplasms)	149	12.9
3. Intentional self-harm (suicide)	90	7.8
4. Heart disease	82	7.1
5. Chronic liver disease and cirrhosis	41	3.5
6. Homicide deaths	35	3.0
7. Cerebrovascular diseases	30	2.6
8. Diabetes mellitus	16	1.4*
9. Congenital malformations, deformations, and chromosomal abnormalities	9	0.8*
10. Influenza and pneumonia	7	0.6*

Source: Orange County Master Death File

Leading Causes of Death by Age Group (cont.), 2010

Leading Causes of Death among Ages 45-64 Years	Number of Deaths	Rate per 100,000 Population in the Age Group
1. Cancer (malignant neoplasms)	1,111	145.0
2. Heart disease	553	72.2
3. Accidents (unintentional injuries)	199	26.0
4. Chronic liver disease and cirrhosis	157	20.5
5. Intentional self-harm (suicide)	122	15.9
6. Cerebrovascular diseases	101	13.2
7. Diabetes mellitus	96	12.5
8. Chronic lower respiratory diseases	63	8.2
9. Viral hepatitis	46	6.0
10. Nephritis, nephrotic syndrome, and nephrosis	32	4.2

Leading Causes of Death among Ages 65 Years and Older	Number of Deaths	Rate per 100,000 Population in the Age Group
1. Heart disease	3,712	1,061.6
2. Cancer (malignant neoplasms)	3,068	877.4
3. Alzheimer's disease	988	282.5
4. Cerebrovascular diseases	925	264.5
5. Chronic lower respiratory diseases	850	243.1
6. Influenza and pneumonia	486	139.0
7. Diabetes mellitus	331	94.7
8. Nephritis, nephrotic syndrome, and nephrosis	237	67.8
9. Parkinson's disease	191	54.6
10. Accidents (unintentional injuries)	186	53.2

Source: Orange County Master Death File

References

Health Status

1. Laves A et al., Whiners and deniers - what does self-rated health measure? Soc Sci Med 2012 Jul;75(1):1-9
2. Tas U et al., Prognostic factors of disability in older people: a systematic review. British Journal of General Practice 2007 Apr;57(537):319-323
3. Guimaraes JMN et al., Association between self-rated health and mortality: 10 years follow up to the Pro=-Saude cohort study. BMC Public Health 2012;12:676
4. Wu S et al., The relationship between self-rated health and objective health status: a population-based study. BMC Public Health 2013;13:320

Life Expectancy

5. U.S. Department of Health and Human Services, Healthy People 2010: Understanding and Improving Health (2nd Edition), U.S. Government Printing Office, Washington, D.C., November 2000.

Environmental Health

Air Quality Index

Impact: In 2012, there were 8 days in which the Air Quality Index (AQI) indicated that air quality conditions were unhealthy for sensitive groups and no days in which air quality conditions were unhealthy or worse.

Description of Indicator: The AQI is an index for reporting daily air quality and is calculated by the Environmental Protection Agency (EPA) based on five major air pollutants regulated by the Clean Air Act: ground-level ozone, particle pollution (also known as particulate matter PM_{10} and $PM_{2.5}$), carbon monoxide, nitrogen dioxide, and sulfur dioxide. Number of days during which the AQI indicated unhealthy conditions for sensitive groups, unhealthy conditions, and very unhealthy conditions are shown. There were no days in which AQI indicated air quality that was hazardous between 2003 and 2012.

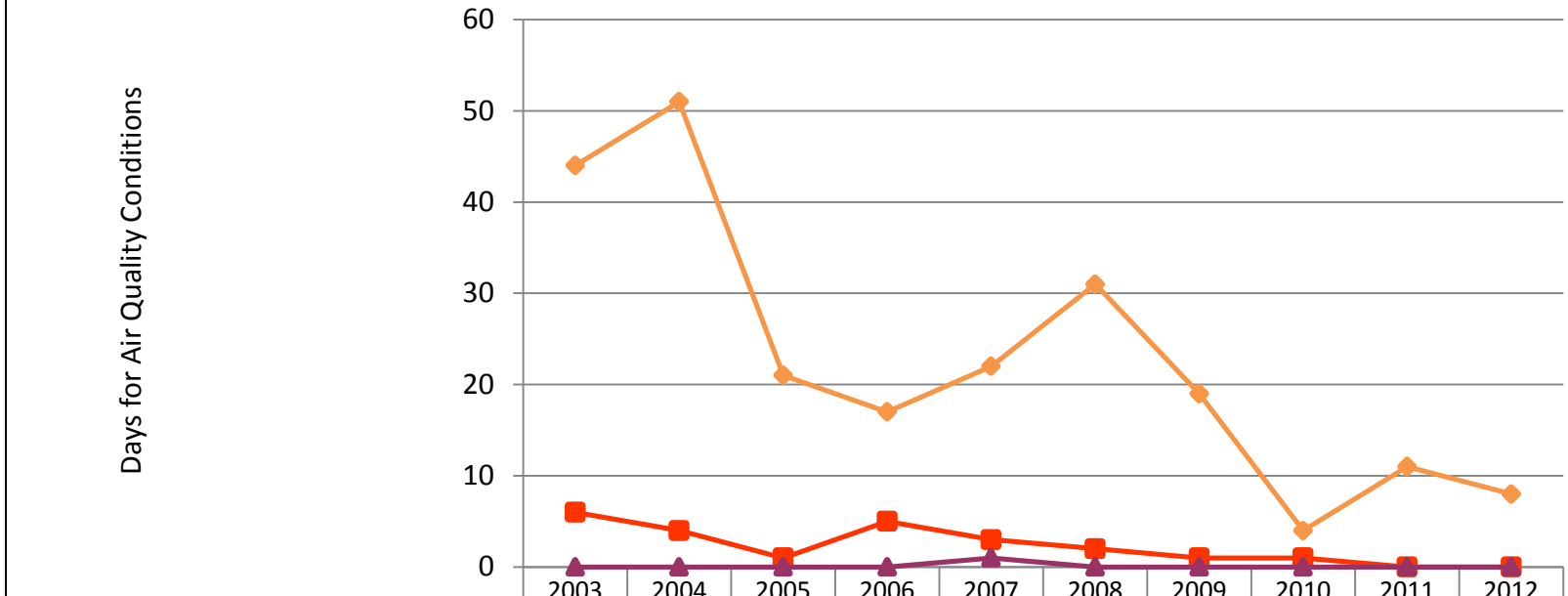
Importance of Indicator: Air quality can aggravate health problems and have been linked with illnesses and deaths from heart or lung disease [1]. Poor air quality especially affects the health of sensitive groups including people with heart or lung disease, older adults, and children [1].

Healthy People 2020 Goal [LHI]: Not comparable with data shown.

The following is a summary of the AQI values and their meaning:

AQI Condition	Meaning
Good (AQI 0 to 50)	Air quality is considered satisfactory, and air pollution poses little or no risk
Moderate (AQI 51 to 100)	Air quality is acceptable; however, for some pollutants there may be a moderate health concern for a very small number of people who are unusually sensitive to air pollution.
Unhealthy for Sensitive Groups (AQI 101 to 150)	Members of sensitive groups may experience health effects. The general public is not likely to be affected.
Unhealthy (AQI 151 to 200)	Everyone may begin to experience health effects; members of sensitive groups may experience more serious health effects.
Very Unhealthy (AQI 201 to 300)	Health warnings of emergency conditions. The entire population is more likely to be affected.
Hazardous (AQI 301 to 500)	Health alert: everyone may experience more serious health effects

Air Quality Index, Orange County, 2003-2012



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Unhealthy for Sensitive Groups (USG)	44	51	21	17	22	31	19	4	11	8
Unhealthy	6	4	1	5	3	2	1	1	0	0
Very Unhealthy	0	0	0	0	1	0	0	0	0	0

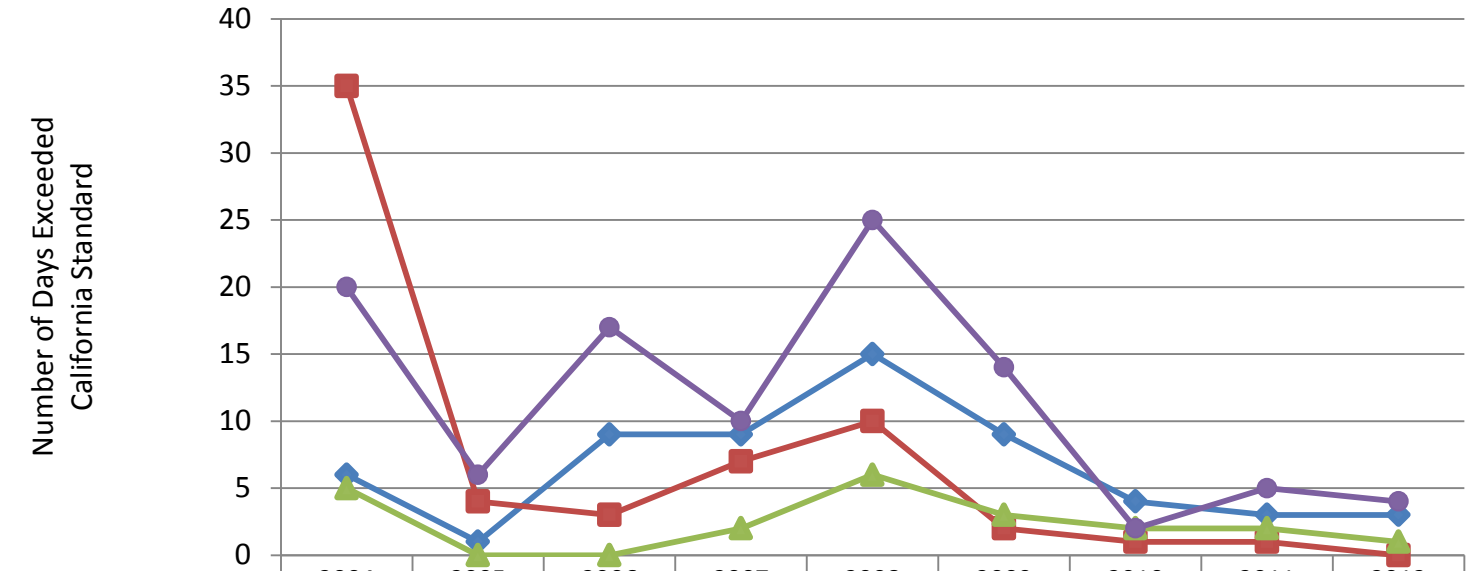
Source: Environmental Protection Agency AirData

Ozone

Description of Indicator: This indicator shows the number of days in a year that the 8-hour average for ozone in parts per million (ppm) of air by volume exceeded the California standard of 0.070 ppm as reported by the South Coast Air Quality Management District.

Importance of Indicator: Exposure to ozone is associated with decreased lung function, respiratory symptoms, hospitalizations, for cardiopulmonary causes, emergency room visits for asthma and premature death [2]. In California, the Air Resources Board estimated that 630 deaths, 4,200 hospital admissions, and 4.7 million lost school days could be prevented each year if California met is current statewide standard of 0.070 ppm for ozone (8-hour average) [2].

Number of Days Ozone Exceeded California Standard, 2004-2012



	2004	2005	2006	2007	2008	2009	2010	2011	2012
Northern OC	6	1	9	9	15	9	4	3	3
Central OC	35	4	3	7	10	2	1	1	0
North Coastal OC	5	0	0	2	6	3	2	2	1
Saddleback Valley	20	6	17	10	25	14	2	5	4

Source: South Coast Air Quality Management District

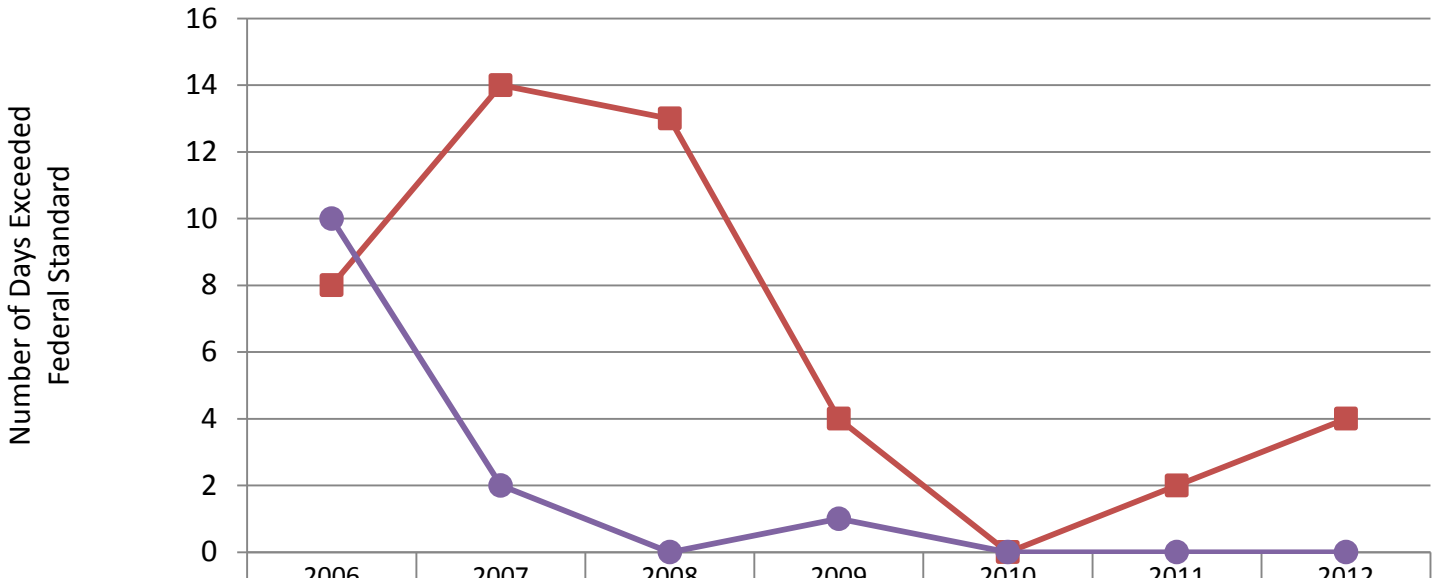
Fine Particulate Matter ($PM_{2.5}$)

Description of Indicator: This indicator shows the number of days in a year that particulate matter less than 2.5 microns in diameter ($PM_{2.5}$) exceeded the federal short-term standard (24-hour average) as reported by the South Coast Air Quality Management District.

Importance of Indicator: Fine particles in the $PM_{2.5}$ size range are able to travel deeply into the respiratory tract, reaching the lungs. Exposure to fine particles is associated with a host of diseases including lung cancer, heart disease, respiratory disease, and acute respiratory infections, especially in children and are associated with increased emergency department admissions for asthma [3].

Technical Note: *Due to availability of data, the indicator shown is based on federal standards for $PM_{2.5}$ (35 µg/m^3 in 2002-2005); California 's standard for $PM_{2.5}$ standard is 12 µg/m^3.*

Number of Days $PM_{2.5}$ Exceeded Federal Standard, 2006-2012



	2006	2007	2008	2009	2010	2011	2012
Central OC	8	14	13	4	0	2	4
Saddleback Valley	10	2	0	1	0	0	0

Note: Particulate matter were not measured at the Northern Orange County or North Coastal Orange County stations.
The federal standards is 35 micrograms per cubic meter of air (µg/m^3).

Source: South Coast Air Quality Management District

References

Air Quality Index

1. U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards Outreach and Information Division. Air Quality Index: A guide to air quality and your health. Research Triangle Park, NC, August 2009. Accessed 8/2013. Available at: http://www.epa.gov/airnow/aqi_brochure_08-09.pdf.

Ozone

2. California Department of Public Health and University of California San Francisco. Healthy Communities Data and Indicator Project. Annual Average Number of Unhealthy Days of Ozone Air Pollution. April 2013. Accessed 8/2013. Available at: http://www.cdph.ca.gov/programs/Documents/Ozone_Narrative_Examples4-14-13.pdf.

Fine Particulate Matter ($PM_{2.5}$)

3. California Department of Public Health and University of California San Francisco. Healthy Communities Data and Indicator Project. Annual Mean Ambient Concentration of Fine Particulate Matter ($PM_{2.5}$). April 2013. Accessed 8/2013. Available at: http://www.cdph.ca.gov/programs/Documents/PM25Narrative_Examples4-14-13.pdf.

Social and Economic Indicators

Poverty

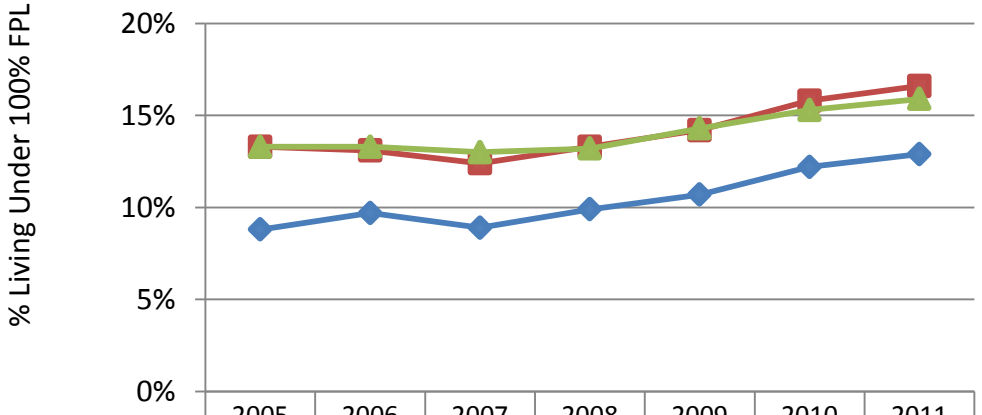
Impact: In 2011, **12.9%** of Orange County's population lived under 100% of the federal poverty level or FPL ($10,890 annual income for single-person household size).

Description of Indicator: This indicator measures the proportion of residents living below the federal poverty level as determined by the U.S. Census Bureau. Poverty level takes into account family size, but does not consider cost of living.

Importance of Indicator: Poverty can negatively affect health in a number of ways. Many harmful health behaviors tend to be more common in people with low income [1-3]. For example, adult smoking is 1.6 times more likely among those living under the federal poverty line [1]. Children living in poverty are more likely to have a child as a teen, more likely to engage in high-risk behaviors, more likely to suffer from chronic diseases, and less likely to have access to health care [4]. As a result, people living in poverty tend to be in poorer health and at increased risk of premature death [2].

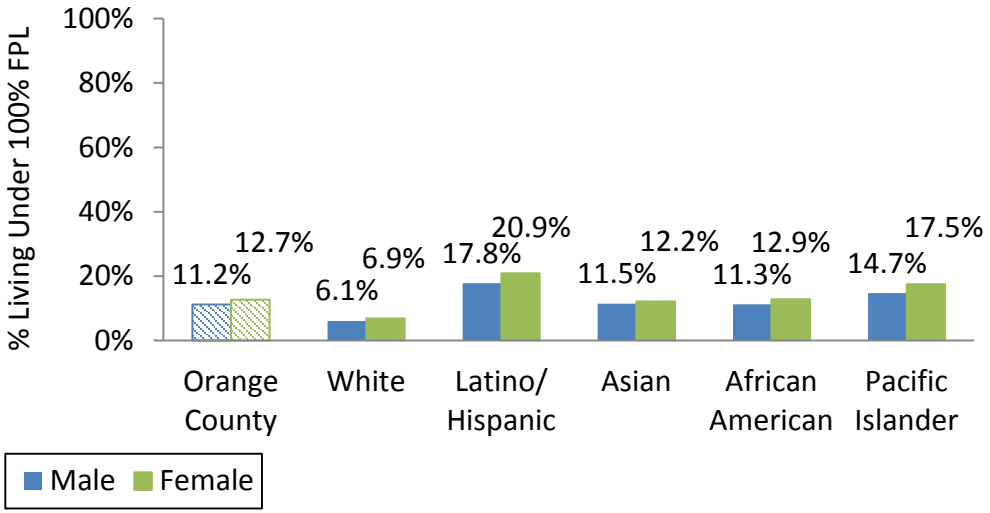
Healthy People 2020 Goal: No target set for goal.

Poverty, 2005-2011

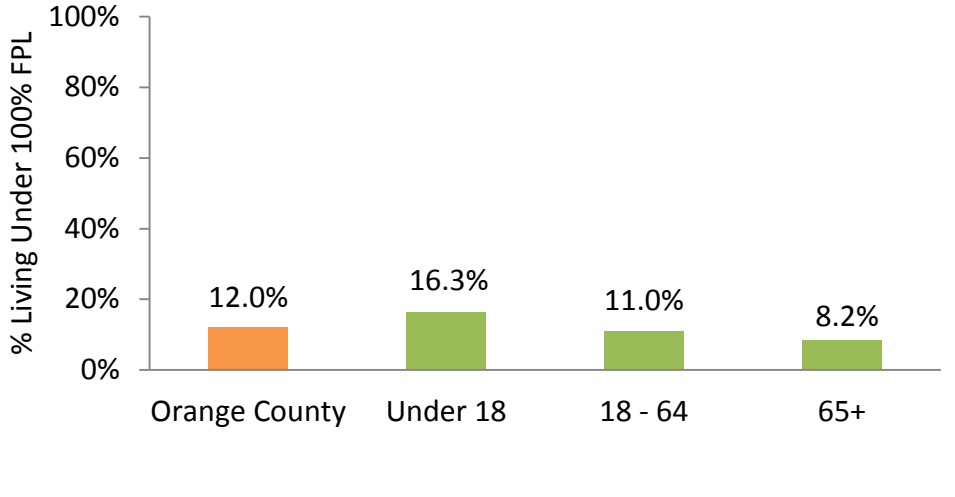


	2005	2006	2007	2008	2009	2010	2011
Orange County	8.8%	9.7%	8.9%	9.9%	10.7%	12.2%	12.9%
CA	13.3%	13.1%	12.4%	13.3%	14.2%	15.8%	16.6%
US	13.3%	13.3%	13.0%	13.2%	14.3%	15.3%	15.9%

Poverty by Race/Ethnicity and Gender, Orange County, 2009-2011



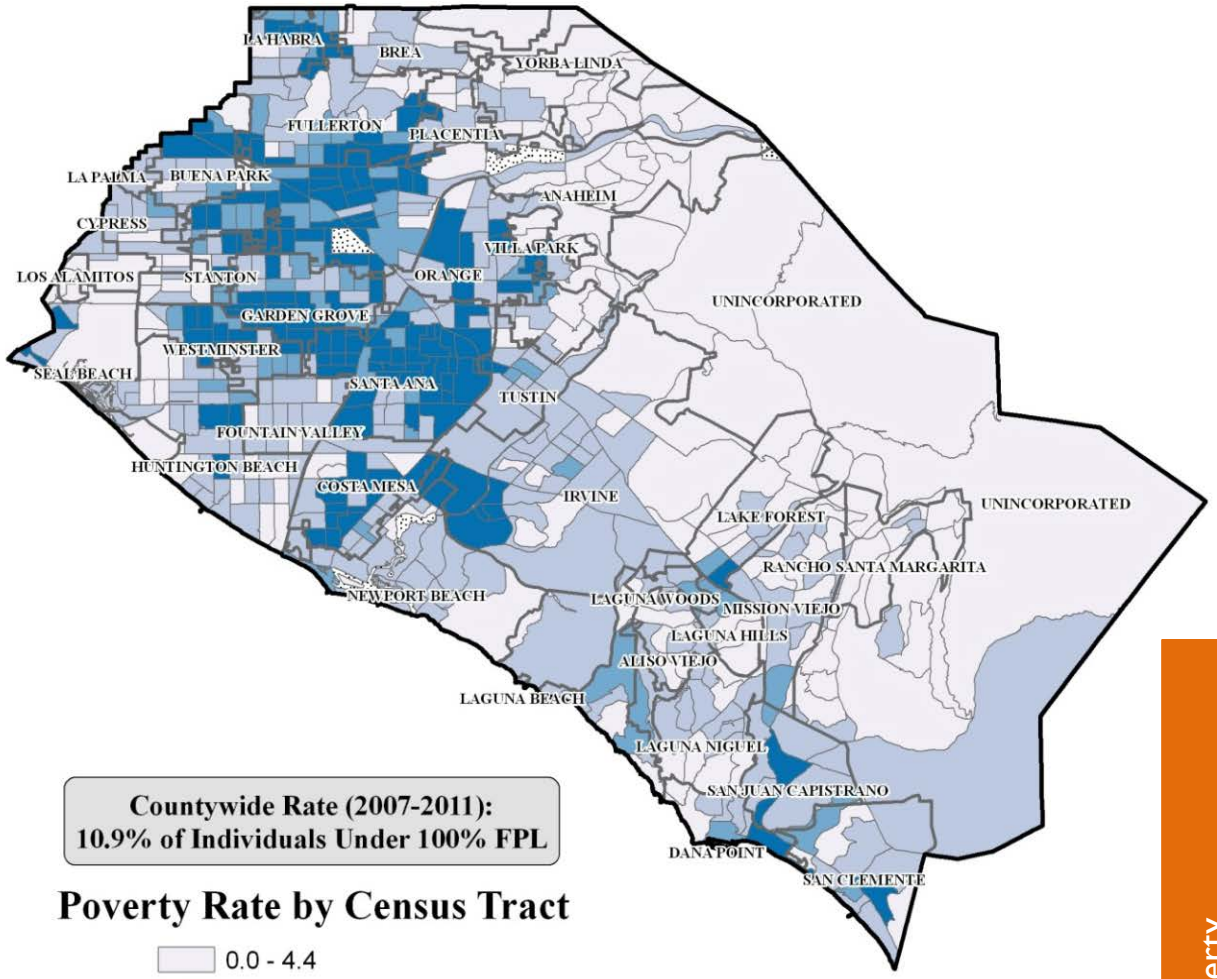
Poverty by Age Group, Orange County, 2009-2011



Source: US Census Bureau American Community Survey

City	% of Individuals Living Under 100% FPL, 2009-2011
Yorba Linda	3.0%
Rancho Santa Margarita	4.0%
Aliso Viejo	4.6%
Mission Viejo	5.2%
Brea	5.5%
Laguna Beach	5.8%
Fountain Valley	5.8%
Lake Forest	6.2%
Laguna Niguel	6.7%
Cypress	6.7%
Dana Point	7.5%
San Clemente	7.6%
Laguna Hills	7.7%
Huntington Beach	8.8%
Newport Beach	8.9%
Seal Beach	9.8%
Buena Park	11.3%
Orange	11.4%
Tustin	11.5%
Irvine	11.8%
La Habra	11.8%
San Juan Capistrano	11.9%
Orange County	12.0%
Placentia	13.0%
Fullerton	15.0%
Westminster	15.1%
United States	15.2%
California	15.5%
Anaheim	15.5%
Garden Grove	15.8%
Costa Mesa	16.3%
Stanton	19.0%
Santa Ana	21.1%
La Palma	Estimate unstable
Laguna Woods	Estimate unstable
Los Alamitos	Estimate unstable
Villa Park	Estimate unstable

Orange County Poverty (2007-2011)
% of Individuals Living Under 100% FPL



Countywide Rate (2007-2011):
10.9% of Individuals Under 100% FPL

Poverty Rate by Census Tract

- 0.0 - 4.4
- 4.5 - 10.9
- 11.0 - 13.9
- 14.0 - 60.2
- OC City Boundaries
- Data missing or unstable

Source: 2007-2011 US Census Bureau, American Community Survey

Unemployment

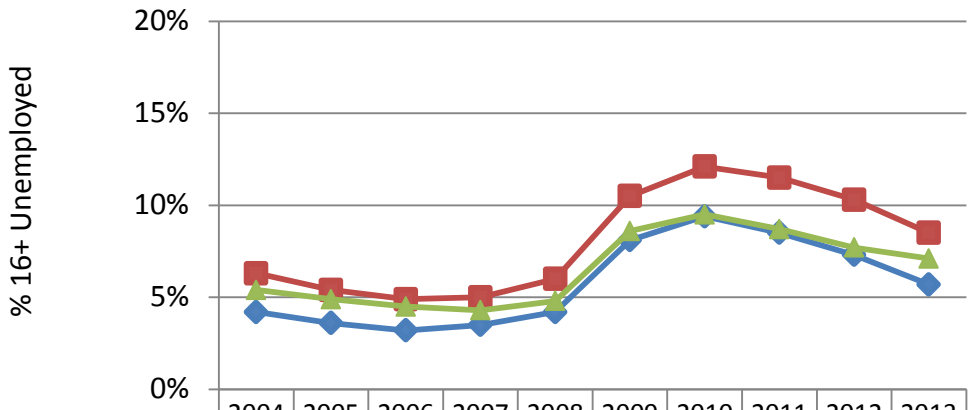
Impact: In 2013, **5.7%** of Orange County residents 16 years and older did not have jobs.

Description of Indicator: This indicator measures the proportion of residents age 16 years and older who do not have jobs. Unemployment rates are based upon place of residence, regardless of place of work. Individuals who have more than one job are counted once. Estimates shown are from the month of April.

Importance of Indicator: Those who lose their jobs are not only more likely to have financial difficulties, but are more likely to report poorer health, depression, anxiety, insomnia and limitations to their social activities [5, 6]. Unemployed people are also more likely to have or develop chronic health conditions that create barriers to going back to work [5]. In teens and young adults, those without jobs are significantly more likely to die early from any cause than their employed peers [7].

Healthy People 2020 Goal: No comparable goal.

Unemployment Rate, April 2004-2013



	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Orange County	4.2%	3.6%	3.2%	3.5%	4.2%	8.1%	9.4%	8.5%	7.3%	5.7%
CA	6.3%	5.4%	4.9%	5.0%	6.0%	10.5%	12.1%	11.5%	10.3%	8.5%
US	5.4%	4.9%	4.5%	4.3%	4.8%	8.6%	9.5%	8.7%	7.7%	7.1%

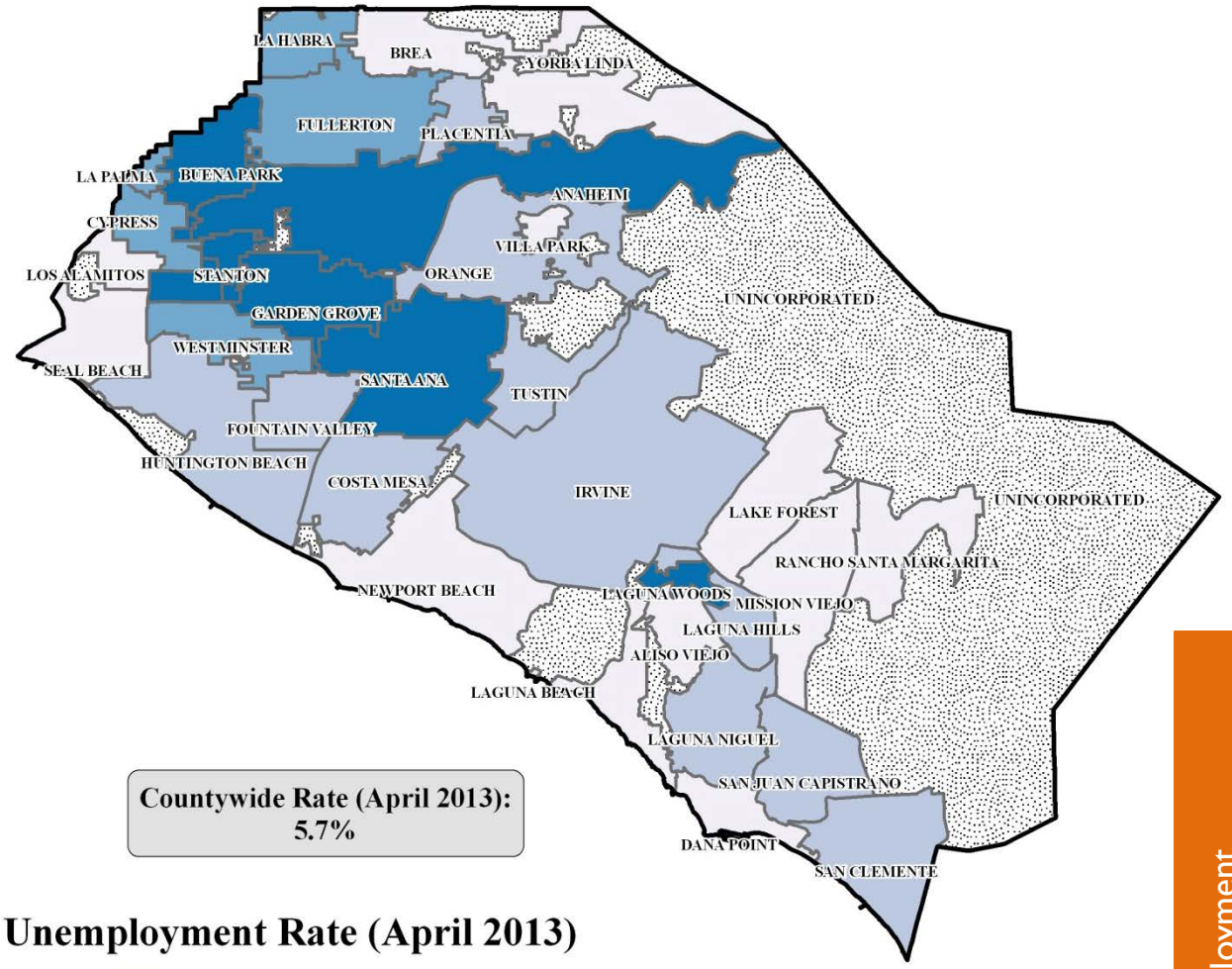
Comparison by Race/Ethnicity not available.

Comparison by Age Group not available.

Source: CA Employment Development Department; US Bureau of Labor Statistics

City	% 16+ Unemployed, April 2013
Aliso Viejo	3.0%
Los Alamitos	3.1%
Villa Park	3.2%
Newport Beach	3.5%
Rancho Santa Margarita	3.6%
Yorba Linda	3.7%
Brea	3.9%
Lake Forest	3.9%
Dana Point	4.1%
Laguna Beach	4.1%
Mission Viejo	4.1%
Seal Beach	4.1%
Irvine	4.2%
Laguna Niguel	4.4%
Huntington Beach	4.6%
San Clemente	4.6%
Fountain Valley	4.7%
Laguna Hills	4.8%
Placentia	5.0%
San Juan Capistrano	5.0%
Costa Mesa	5.1%
Orange	5.2%
Tustin	5.6%
Orange County	5.7%
Cypress	6.0%
La Palma	6.3%
Westminster	6.3%
Fullerton	6.4%
La Habra	6.4%
Buena Park	7.1%
Garden Grove	7.1%
United States	7.1%
Anaheim	7.3%
Laguna Woods	7.9%
California	8.5%
Santa Ana	9.1%
Stanton	9.3%

Orange County Unemployment Rate (April 2013)



Source: CA Employment Development Department, US Bureau of Labor statistics

Single Parent Families

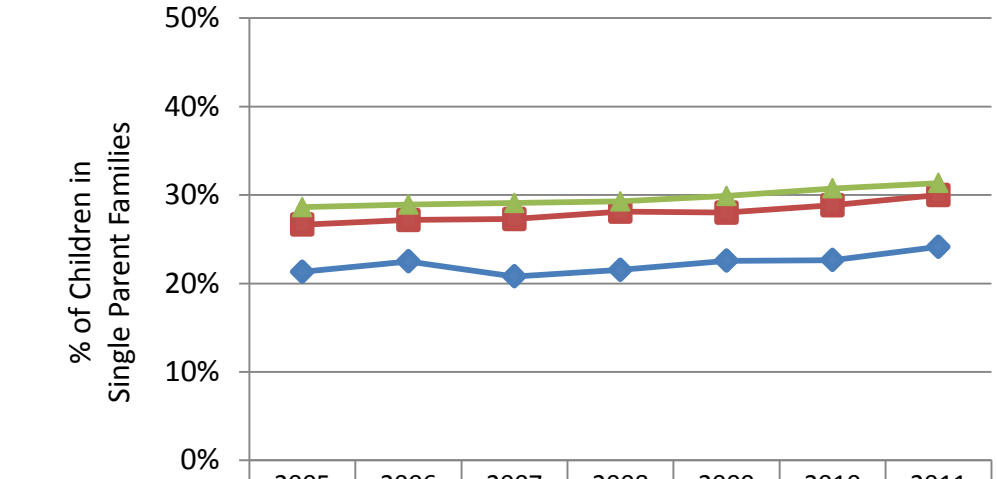
Impact: In 2011, **24% of children** in Orange County lived in single parent families.

Description of Indicator: This indicator measures the proportion of children living in single parent families among children who have complete information on family type as determined by the U.S. Census Bureau.

Importance of Indicator: Children growing up in single parent households are more likely to be economically disadvantaged than those in two parent households [8]. Children in single parent families also have decreased access to parental time, are more likely to grow up in stressful environments, and may have lower quality of parental relationships [8].

Healthy People 2020 Goal: No comparable goal.

Single Parent Families, 2005-2011



	2005	2006	2007	2008	2009	2010	2011
Orange County	21.3%	22.5%	20.8%	21.5%	22.6%	22.6%	24.1%
CA	26.6%	27.2%	27.3%	28.1%	28.0%	28.8%	30.0%
US	28.6%	28.9%	29.1%	29.3%	29.9%	30.7%	31.4%

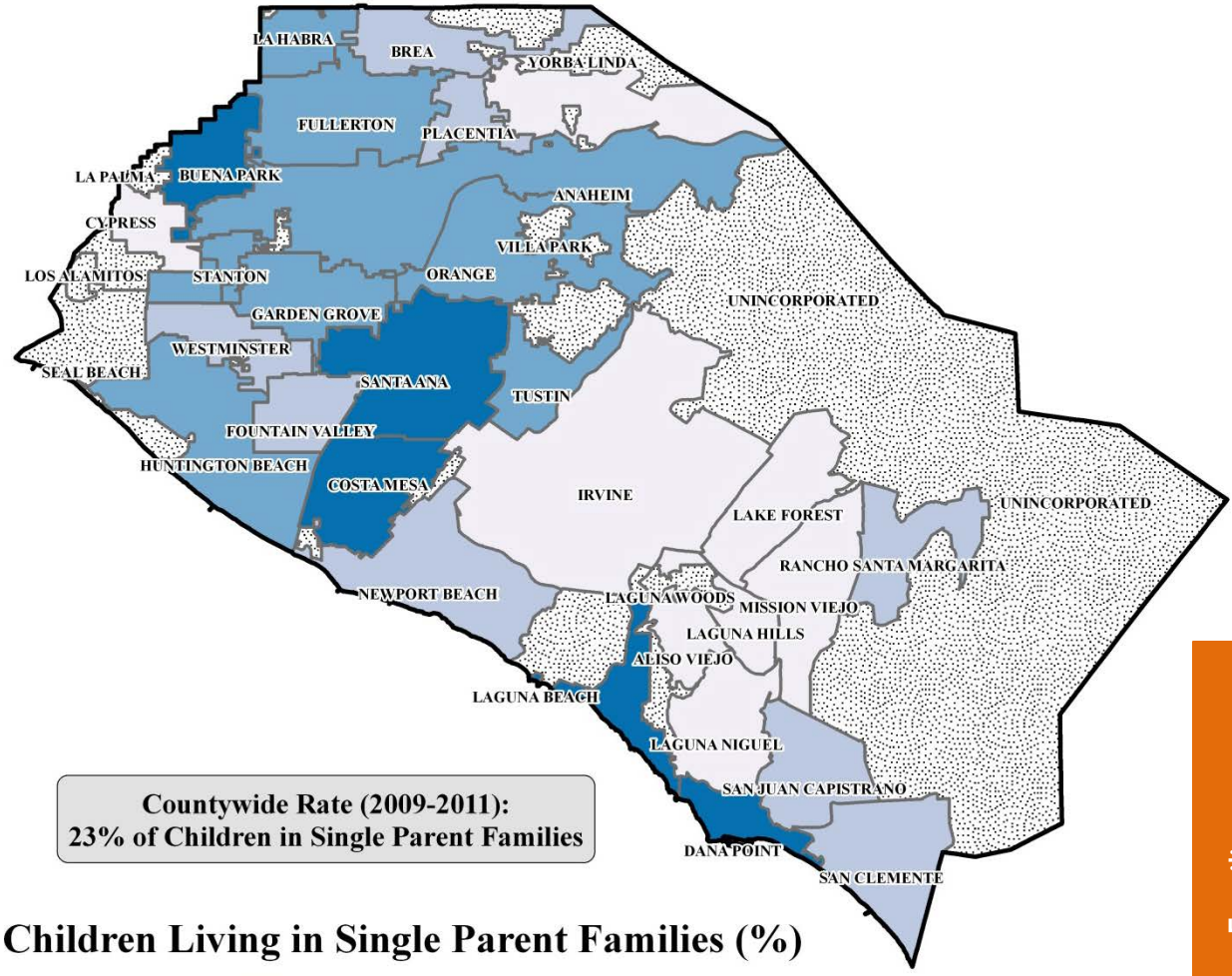
Comparison by Race/Ethnicity not available.

Comparison by Age Group not indicated.

Source: US Census Bureau American Community Survey

City	% of Children in Single Parent Families, 2009-2011
Yorba Linda	11.2%
Mission Viejo	11.7%
Irvine	14.2%
Laguna Niguel	15.7%
Aliso Viejo	16.4%
Lake Forest	17.0%
Cypress	17.0%
Laguna Hills	17.9%
Brea	18.2%
Newport Beach	18.7%
San Clemente	19.8%
Westminster	20.3%
San Juan Capistrano	20.8%
Fountain Valley	21.1%
Rancho Santa Margarita	21.1%
Placentia	22.2%
Orange County	23.2%
Orange	24.6%
Fullerton	24.8%
Tustin	25.3%
Garden Grove	25.5%
Huntington Beach	26.1%
La Habra	26.1%
Stanton	28.3%
California	28.9%
Anaheim	29.2%
Dana Point	29.5%
Costa Mesa	30.1%
Buena Park	30.5%
United States	30.6%
Santa Ana	31.0%
Laguna Beach	35.6%

Orange County Children in Single Parent Families (2009-2011) Percent of Children



Source: 2009-2011 US Census Bureau, American Community Survey

Adults with High School Diploma

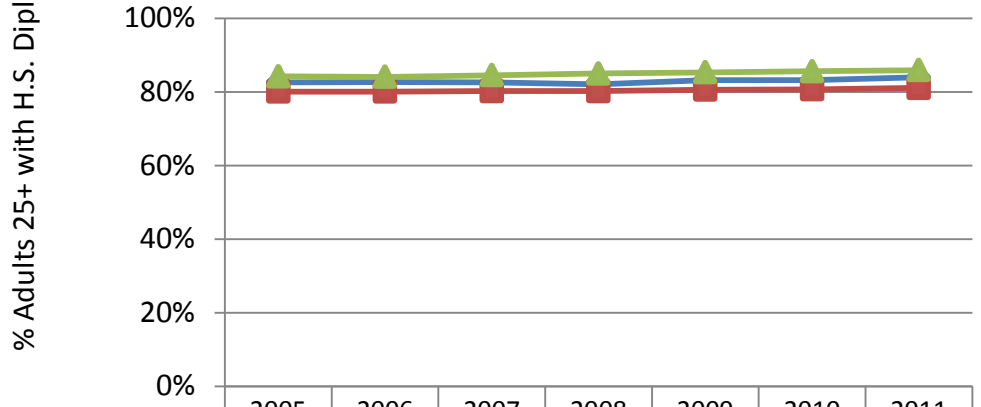
Impact: In 2011, **84.0%** of individuals 25 and older in Orange County had a high school diploma or equivalent.

Description of Indicator: This indicator measures the proportion of residents 25 years of age and older who have a high school diploma or its equivalent as determined by the U.S. Census Bureau.

Importance of Indicator: High school graduates have lower death rates from all causes and are less likely to suffer from heart disease, motor vehicle death, homicide, high cholesterol, and other health issues [9]. They may also be less likely to engage in behaviors harmful to their health [10]. Those without a high school diploma are approximately five times more likely to smoke than those with a graduate degree [11]. Additionally, among non-elderly adults, those without a high school diploma are over 1.5 times more likely to lack health insurance than those with a diploma [12].

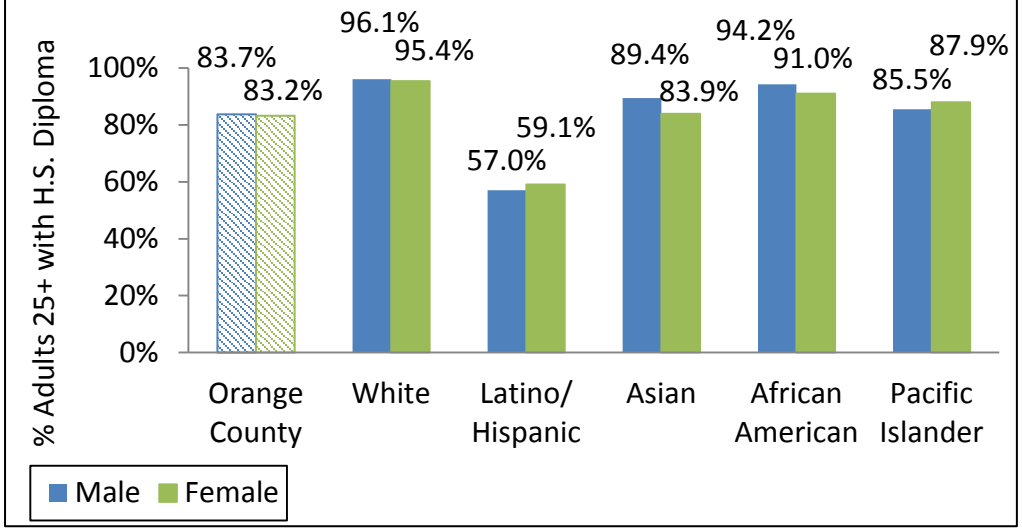
Healthy People 2020 Goal: Not comparable with data shown.

High School Diploma, 2005-2011

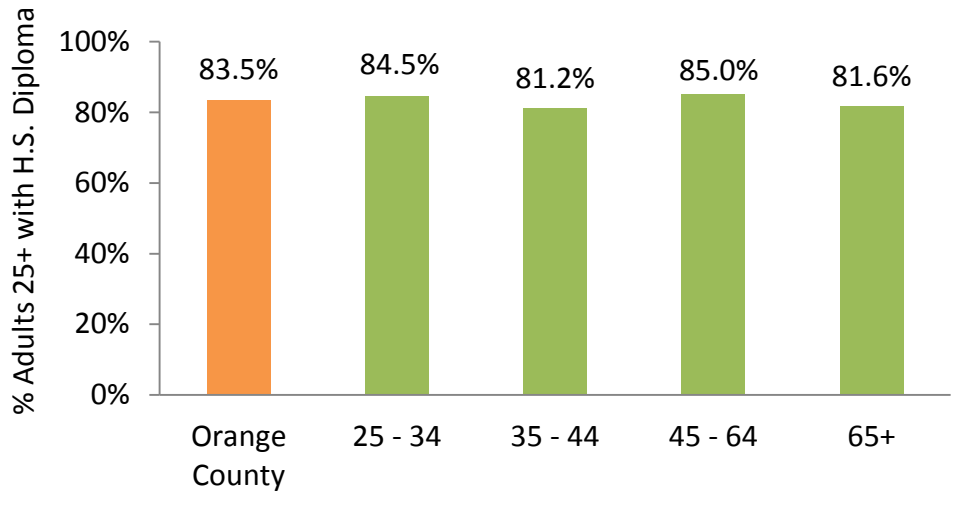


	2005	2006	2007	2008	2009	2010	2011
Orange County	82.6%	82.7%	82.6%	82.1%	83.2%	83.2%	84.0%
CA	80.1%	80.1%	80.2%	80.2%	80.6%	80.7%	81.1%
US	84.2%	84.1%	84.5%	85.0%	85.3%	85.6%	85.9%

High School Diploma by Race/Ethnicity and Gender, Orange County, 2009-2011



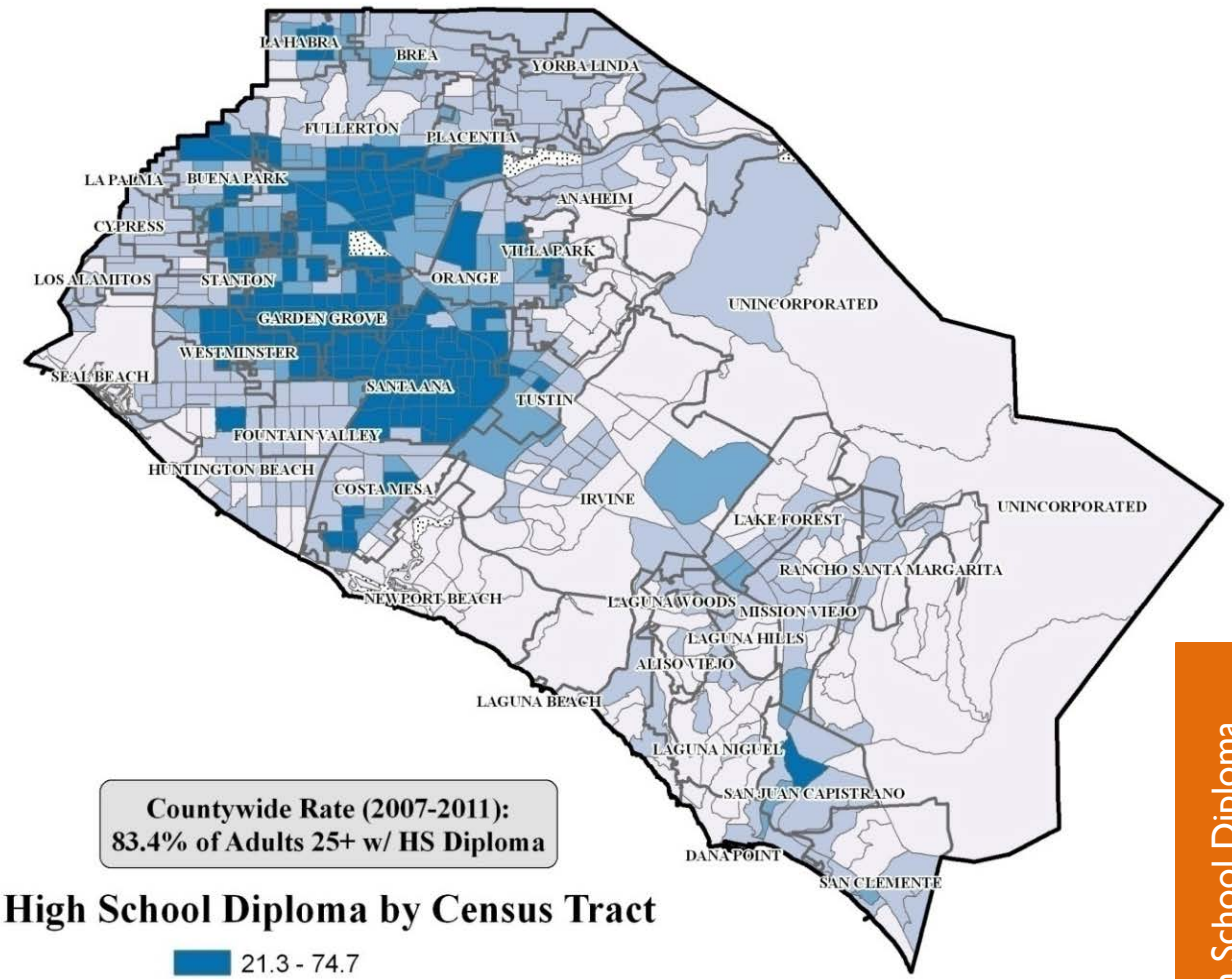
High School Diploma by Age Group, Orange County, 2009-2011



Source: US Census Bureau American Community Survey

City	% Adults 25+ with High School Diploma, 2009-2011
Newport Beach	97.7%
Laguna Beach	97.3%
Laguna Niguel	96.7%
Irvine	96.1%
Aliso Viejo	96.0%
Dana Point	94.9%
Seal Beach	94.8%
Yorba Linda	94.8%
Rancho Santa Margarita	94.6%
San Clemente	94.6%
Mission Viejo	94.1%
Huntington Beach	92.7%
Laguna Hills	92.6%
Cypress	92.5%
Lake Forest	92.4%
Fountain Valley	90.5%
Brea	89.6%
Fullerton	85.7%
United States	85.6%
Costa Mesa	84.8%
Placentia	84.3%
Orange County	83.5%
Tustin	82.8%
Orange	82.7%
San Juan Capistrano	82.5%
Buena Park	82.2%
California	80.8%
La Habra	79.5%
Westminster	74.4%
Anaheim	73.8%
Garden Grove	72.7%
Stanton	66.2%
Santa Ana	52.5%
La Palma	Estimate unstable
Laguna Woods	Estimate unstable
Los Alamitos	Estimate unstable
Villa Park	Estimate unstable

Orange County Educational Attainment (2007-2011)
% of Adults 25+ With High School Diploma



Countywide Rate (2007-2011):
83.4% of Adults 25+ w/ HS Diploma

High School Diploma by Census Tract

- 21.3 - 74.7
- 74.8 - 83.4
- 83.5 - 96.2
- 96.3 - 100.0
- OC City Boundaries
- Data missing or unstable

Source: 2007-2011 US Census Bureau, American Community Survey

Average Freshman Graduation Rate

Impact: In 2011/12, **85.3%** of students in Orange County who started high school in the 9th grade graduated by the end of the 12th grade.

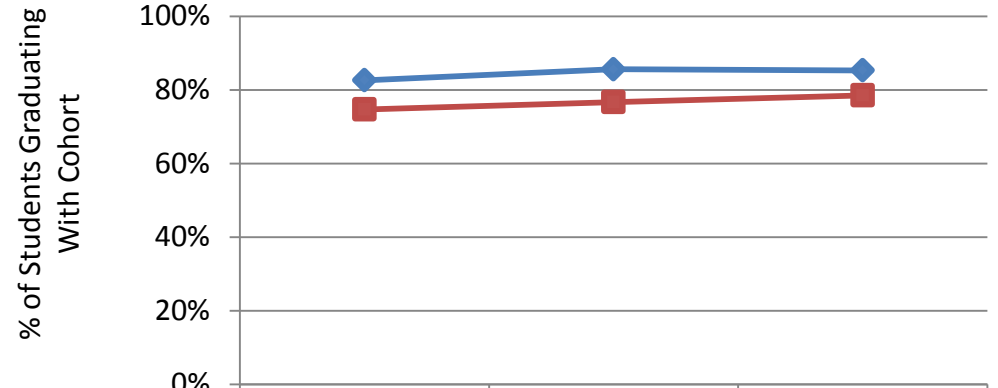
Description of Indicator: This indicator measures the proportion of students who start high school in the 9th grade and graduate by the end of the 12th grade as measured by the California Department of Education.

Importance of Indicator: Educational attainment has been inversely associated with a number of health behaviors, including tobacco use, physical inactivity, poor diet, alcohol and drug use, and violence [13]. Harmful health behaviors and academic underachievement may be "mutually reinforcing" factors, particularly regarding substance abuse [13]. Ultimately, high school graduates are at lower risk from heart disease, motor vehicle death, homicide, high cholesterol, and other health issues [14].

Healthy People 2020 Goal [LHI]: Increase the proportion of students who graduate with a regular diploma 4 years after starting 9th grade from 74.9% of students attending public schools to 82.4%.

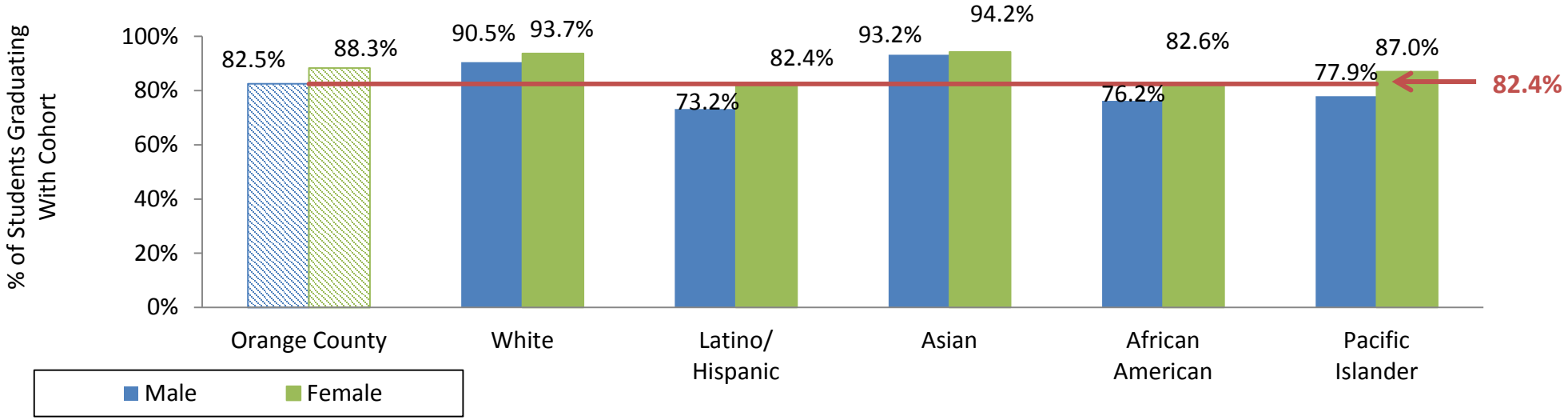
Indicates Healthy People 2020 Goal

Average Freshman Graduation Rate , 2009/10-2011/12



	2009/10	2010/11	2011/12
Orange County	82.6%	85.6%	85.3%
CA	74.7%	76.7%	78.5%

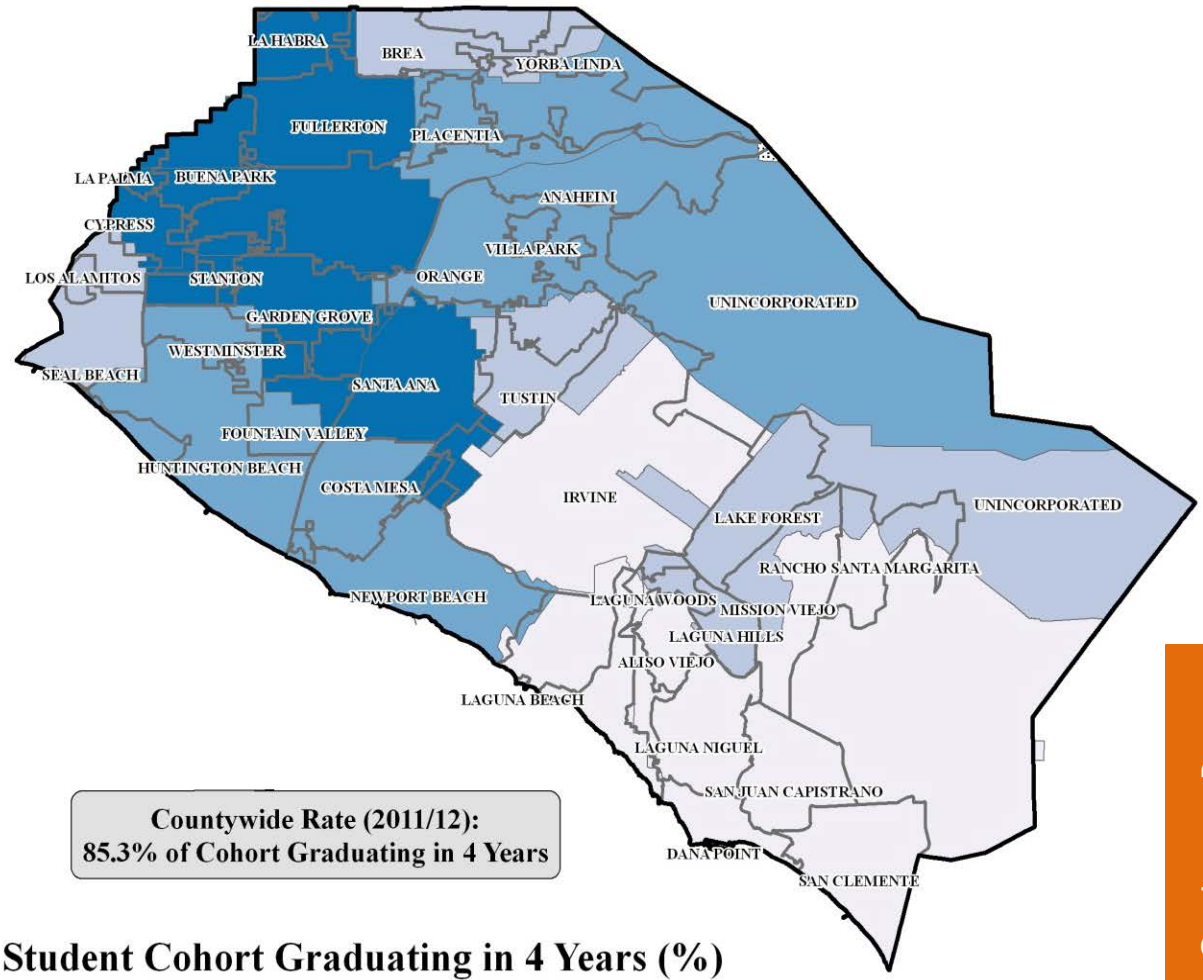
Average Freshman Graduation Rate by Race/Ethnicity and Gender, Orange County, 2011/12



Source: California Department of Education

School District	Average Freshman Graduation Rate, 2011/12
Laguna Beach Unified	97.6%
Capistrano Unified	96.9%
Irvine Unified	95.8%
Brea-Olinda Unified	95.3%
Saddleback Valley Unified	95.2%
Tustin Unified	95.2%
Los Alamitos Unified	95.0%
Newport-Mesa Unified	93.9%
Huntington Beach Union High	93.5%
Orange Unified	93.1%
Placentia-Yorba Linda Unified	91.8%
Garden Grove Unified	87.8%
Fullerton Joint Union High	87.3%
Orange County	85.3%
Santa Ana Unified	85.2%
Anaheim Union High	82.5%
California	78.5%

Orange County Freshman Graduation Rate (2011/12)
Percent of Cohort Graduating in 4 Years



Countywide Rate (2011/12):
85.3% of Cohort Graduating in 4 Years

Student Cohort Graduating in 4 Years (%)

- 82.5 - 87.8
- 87.9 - 93.9
- 94.0 - 95.3
- 95.4 - 97.6
- Data missing or unstable
- OC City Boundaries

Source: California Department of Education
NOTE: Not all students assigned to Secondary School District

References

Poverty

1. Centers for Disease Control and Prevention. CDC Health Disparities and Inequalities Report — United States, 2011. MMWR 2011; 60(Suppl):1-113.
2. Marmot M. The influence of income on health: Views of an Epidemiologist. Health Affairs 2002; 21(2):31-46.
3. Effect of child and family poverty on child health in the United States. Pediatrics 2003; 112(3):707-711.
4. Wood D. Effect of child and family poverty on child health in the United States. Pediatrics 2003; 112(3):707-711.

Unemployment

5. Hillemeier M, et al. Measuring contextual characteristics for community health. Health Services Research 2003; 38(6.2):1645-1717.
6. Winkleby MA, et al. Socioeconomic status and health: How education, income, and occupation contribute to risk factors for cardiovascular disease. American Journal of Public Health 1992:82(6):816-820.
7. Centers for Disease Control and Prevention. Health disparities and inequities report – United States, 2011. MMWR 2011; 60(S):1-114.

Single Parent Families

8. Waldfogel J et al., Fragile families and child wellbeing. Future Child. 2010 Fall;20(2):87-112.

Adults with High School Diploma

9. Hillemeier M, et al. Measuring contextual characteristics for community health. Health Services Research 2003; 38(6.2):1645-1717.
10. Winkleby MA, et al. Socioeconomic status and health: How education, income, and occupation contribute to risk factors for cardiovascular disease. American Journal of Public Health 1992:82(6):816-820. 11
11. Centers for Disease Control and Prevention. Vital Signs: Current Cigarette Smoking Among Adults Aged ≥ 18 Years – United States, 2009. Morbidity and Mortality Weekly Report 2010; 59(35):1135-40.
12. Centers for Disease Control and Prevention. Health disparities and inequities report – United States, 2011. MMWR 2011; 60(S):1-114.

Average Freshman Graduation Rate

13. Bradley BJ and Greene AC. Do health and education agencies in the United States share responsibility for academic achievement and health? A review of 25 years of evidence about the relationship of adolescents' academic achievement and health behaviors. J Adolesc Health 2013 May;52(5):523-32.
14. Hillemeier M, et al. Measuring contextual characteristics for community health. Health Services Research 2003; 38(6.2):1645-1717.

Housing and Environmental Indicators

Crowded Living Conditions

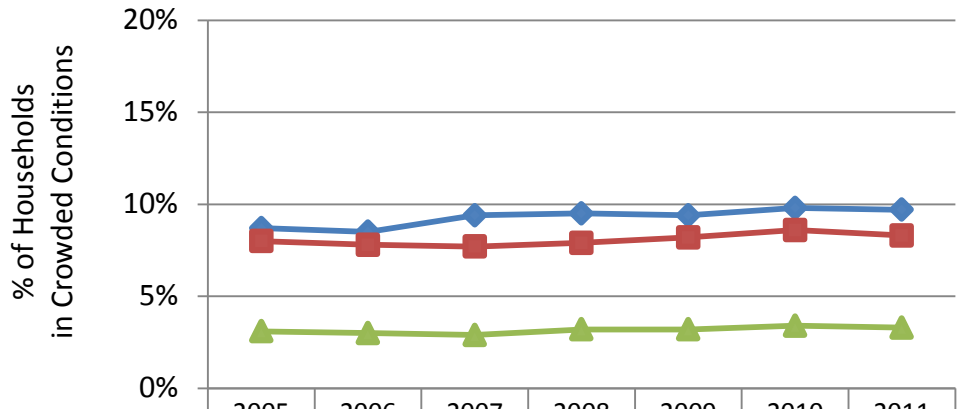
Impact: In 2011, **9.7%** (95,999) of households in Orange County lived in crowded living conditions.

Description of Indicator: This indicator measures the proportion of housing units, both owned and rented, which have more than one person per room, a common definition of crowded living conditions as reported by the U.S. Census Bureau.

Importance of Indicator: Crowded households can lead to stress caused by lack of privacy, quiet, and having to manage a large number of relationships [1]. Living in crowded housing is associated with poor school performance and behavioral problems among children [2]. Crowded housing may also facilitate the spread of communicable diseases, such as respiratory infections and tuberculosis [1]. Additionally, crowding is associated with low birth weight and asthma, triggered by poor housing conditions, such as moisture damaged walls, mold, and pest problems [3].

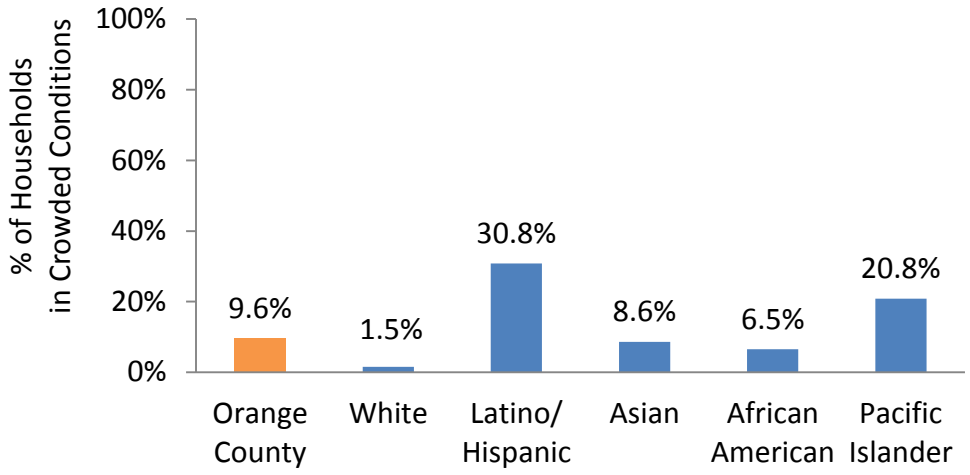
Healthy People 2020 Goal: No comparable goal.

Crowded Living Conditions, 2005-2011



	2005	2006	2007	2008	2009	2010	2011
Orange County	8.7%	8.5%	9.4%	9.5%	9.4%	9.8%	9.7%
CA	8.0%	7.8%	7.7%	7.9%	8.2%	8.6%	8.3%
US	3.1%	3.0%	2.9%	3.2%	3.2%	3.4%	3.3%

Crowded Living Conditions by Race/Ethnicity, Orange County, 2009-2011

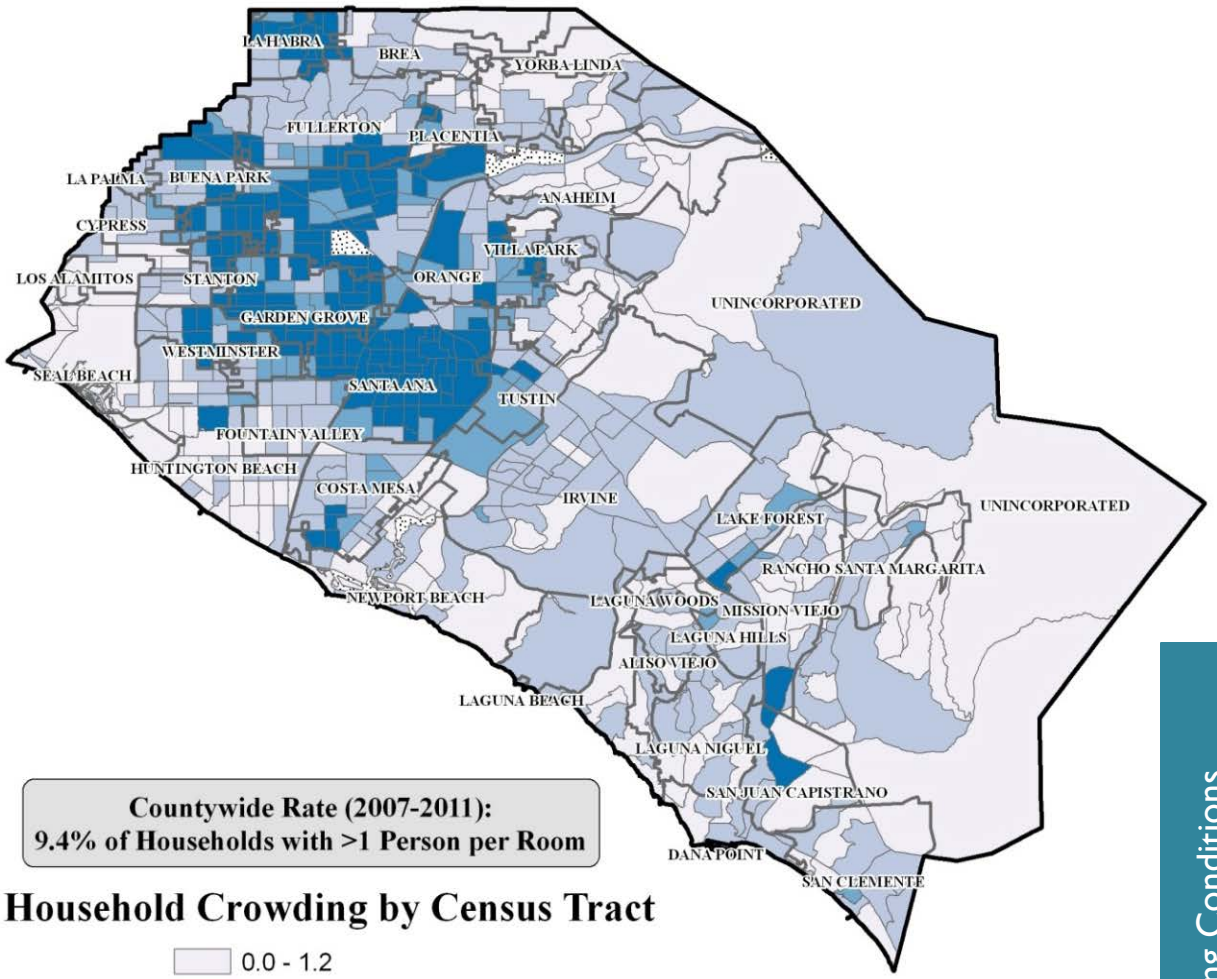


Comparison by Age Group not indicated.

Source: US Census Bureau American Community Survey

City	% Households with More Than 1 Person per Room, 2009-2011
Yorba Linda	1.0%
Newport Beach	1.1%
Dana Point	2.4%
Huntington Beach	2.7%
Aliso Viejo	2.8%
Irvine	3.0%
Fountain Valley	3.0%
Laguna Niguel	3.1%
San Clemente	3.3%
United States	3.3%
Brea	3.5%
Mission Viejo	3.8%
Lake Forest	4.1%
Laguna Hills	4.2%
Rancho Santa Margarita	4.3%
Cypress	4.5%
San Juan Capistrano	8.2%
California	8.4%
Tustin	9.3%
Costa Mesa	9.3%
Fullerton	9.5%
Orange County	9.6%
Placentia	10.3%
Orange	10.5%
Buena Park	12.0%
Westminster	12.7%
Garden Grove	16.6%
Anaheim	18.8%
La Habra	20.9%
Stanton	22.3%
Santa Ana	33.5%
La Palma	Estimate unstable
Laguna Beach	Estimate unstable
Laguna Woods	Estimate unstable
Los Alamitos	Estimate unstable
Seal Beach	Estimate unstable
Villa Park	Estimate unstable

Orange County Household Crowding (2007-2011)
% of Households with >1 Person per Room



Countywide Rate (2007-2011):
9.4% of Households with >1 Person per Room

Household Crowding by Census Tract

- 0.0 - 1.2
- 1.3 - 9.4
- 9.5 - 14.9
- 15.0 - 72.4
- OC City Boundaries
- Data missing or unstable

Source: 2007-2011 US Census Bureau, American Community Survey

Park Access

Impact: In 2013, **87.9%** of Orange County's population lived within a ½ mile of a park at least one acre in size.

Description of Indicator: This indicator measures the proportion of population living within a ½ mile of a park at least one acre in size as estimated using the proximity of parks, derived from the California Protected Area Database (v1.9), to U.S. Census block centroids.

Importance of Indicator: The number and proximity of parks in a neighborhood can raise fitness levels of residents [4]. Physical activity is a key factor in weight loss, maintaining a healthy weight, and preventing obesity – the 2nd leading behavioral contributor to death in the United States [5]. Those who are physically active tend to live longer than those who are inactive and they are at reduced risk for cardiovascular diseases, certain cancers, diabetes, depression, and a number of other significant health problems [6].

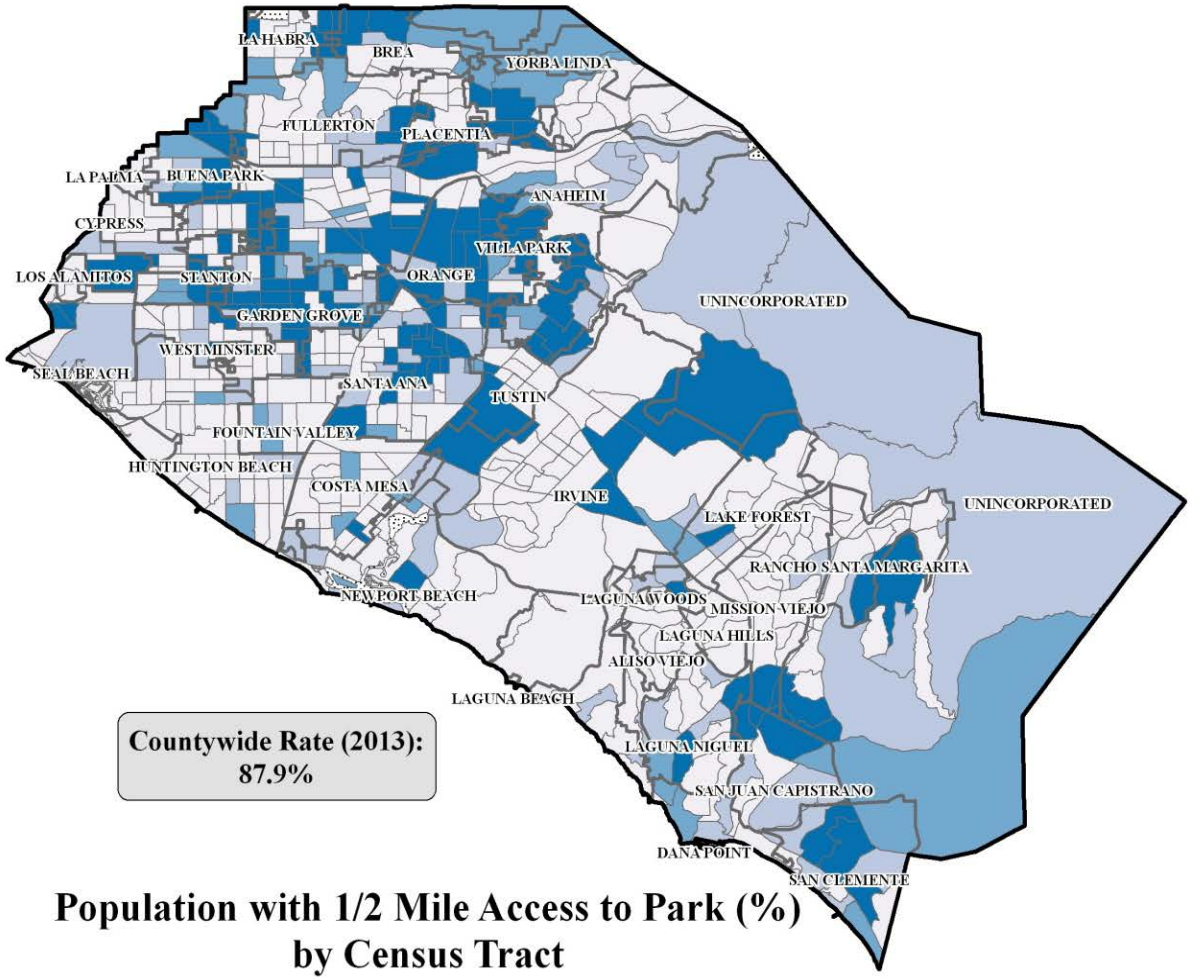
Healthy People 2020 Goal: No comparable goal.

Technical Notes: *California value derived from CDPH analysis of CPAD v1.8, which is not the latest available, most complete data source for Orange County. Trends over time are not appropriate due to improvements in completeness of dataset, which do not necessarily reflect increases in park access.*

City	% of Population within ½ mile of Park, 2013
Aliso Viejo	100.0%
Laguna Hills	100.0%
La Palma	100.0%
Rancho Santa Margarita	100.0%
Mission Viejo	99.9%
Cypress	99.7%
Huntington Beach	98.7%
Newport Beach	98.1%
Laguna Beach	98.0%
Fountain Valley	97.8%
Placentia	96.7%
Costa Mesa	96.4%
Lake Forest	96.4%
Dana Point	96.2%
Westminster	96.2%
Irvine	95.0%
Laguna Niguel	94.8%
Fullerton	93.5%
Laguna Woods	92.7%
La Habra	90.5%
Yorba Linda	90.1%
Orange County	87.9%
Anaheim	87.9%
Brea	87.8%
Los Alamitos	85.5%
San Clemente	83.8%
Tustin	82.9%
San Juan Capistrano	82.7%
Santa Ana	79.1%
Orange	78.2%
Seal Beach	74.8%
California (see technical note)	73.8%
Buena Park	73.5%
Garden Grove	66.7%
Stanton	65.7%
Villa Park	27.9%

Source: US Census Bureau

Orange County Percent of Population with 1/2 Mile Access to a Park



Population with 1/2 Mile Access to Park (%) by Census Tract

- 0% - 79.5%
- 79.6% - 87.9%
- 88% - 99.9%
- 100%
- OC City Boundaries
- Data missing or unstable

Source: California Protected Areas Database, V1.9; US Census Bureau, 2010 US Census

Healthy Food Availability

Impact: In 2009, **11.1%** of Orange County's food retailers were classified as "healthy."

Description of Indicator: The Modified Retail Food Environment (mRFEI) score is an index based on the number of "healthy" food retailers as a proportion of both "healthy" and "less healthy" food retailers as defined by the Centers for Disease Control and Prevention. "Healthy" food retailers include supermarkets, larger grocery stores, supercenters, and produce stores. Less healthy food retailers include convenience stores, fast food restaurants, and small grocery stores.

Importance of Indicator: People may be more likely to eat a healthy diet including fruits and vegetables and less likely to be obese if they have access to places that sell fruits and vegetables [7, 8]. Poor diet is a key factor in preventing obesity and can offer protection against illnesses such as heart disease and certain cancers [9, 10].

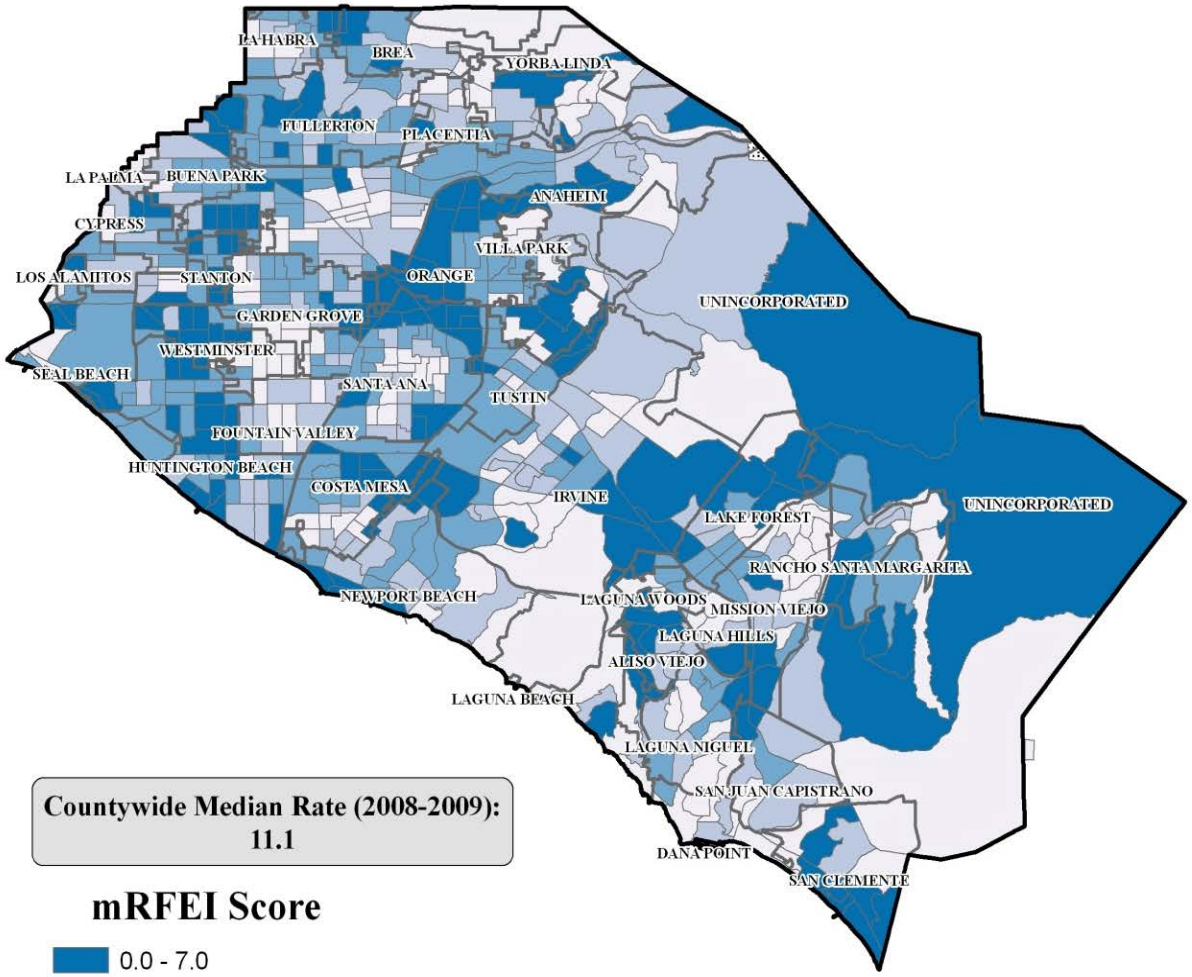
Healthy People 2020 Goal: (Developmental) Increase the proportion of Americans who have access to a food retail outlet that sells a variety of foods that are encouraged by the Dietary Guidelines of Americans.

Technical Notes: *Trends over time are not available.*

City	Median mRFEI Score, 2009
Dana Point	18.2
Laguna Beach	18.2
Laguna Hills	16.7
Mission Viejo	16.7
Fountain Valley	15.8
Yorba Linda	15.4
Laguna Niguel	14.3
San Juan Capistrano	14.3
Placentia	14.0
Irvine	13.3
Rancho Santa Margarita	12.5
La Habra	12.1
Anaheim	11.7
Newport Beach	11.3
Brea	11.2
Santa Ana	11.1
Orange County	11.1
California	11.0
Garden Grove	10.7
Fullerton	10.5
Costa Mesa	10.3
United States	10.0
Cypress	9.8
Lake Forest	9.5
Buena Park	9.1
Tustin	9.1
Huntington Beach	8.0
Seal Beach	7.7
Orange	7.1
Westminster	7.1
Stanton	6.7
Aliso Viejo	5.9
San Clemente	4.0
La Palma	Estimate unstable
Laguna Woods	Estimate unstable
Los Alamitos	Estimate unstable
Villa Park	Estimate unstable

Source: Centers for Disease Control and Prevention

Orange County mRFEI by Census Tract
Percentage of Food Retail that is "Healthy"



Countywide Median Rate (2008-2009): 11.1

mRFEI Score

- 0.0 - 7.0
- 7.1 - 11.1
- 11.2 - 16.3
- 16.4 - 60.0
- Data missing or unstable
- OC City Boundaries

Source: Modified Retail Food Environment Index (mRFEI), Centers for Disease Control and Prevention

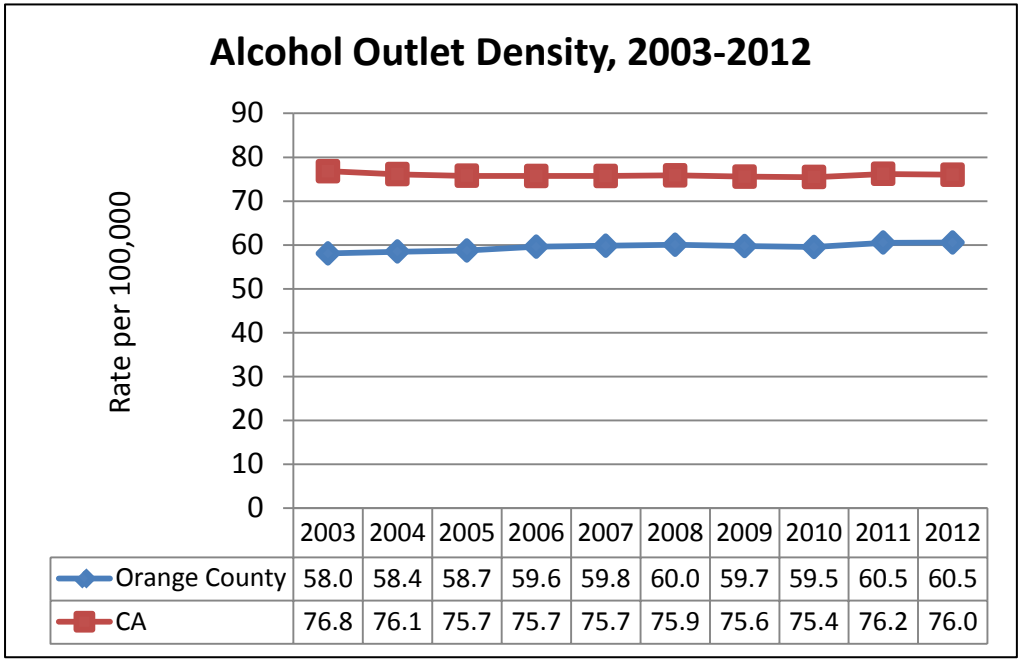
Alcohol Outlet Density

Impact: In 2012, there were **1,851 off-sale alcohol outlets** in Orange County, for a rate of 60.5 outlets per 100,000 population.

Description of Indicator: This indicator measures the number of off-sale alcohol outlets (sites where liquor is consumed away from the point of purchase) as derived from California Alcohol Beverage Control and Department of Finance Data per 100,000 residents.

Importance of Indicator: Alcohol consumption is the 3rd leading behavioral contributor to death in the United States [11]. High alcohol outlet density has been associated with higher alcohol consumption, increasing how often people drink and how much they drink per session [12]. Studies have linked neighborhoods with higher alcohol outlet density with higher rates of alcohol-related pedestrian collisions, alcohol-related motor vehicle crashes, and alcohol-related motor vehicle crash deaths [12]. It has been estimated that for every 10% increase in the number of alcohol outlets within an area, a 1.7 to 2.1% increase in violent crime can be expected [12].

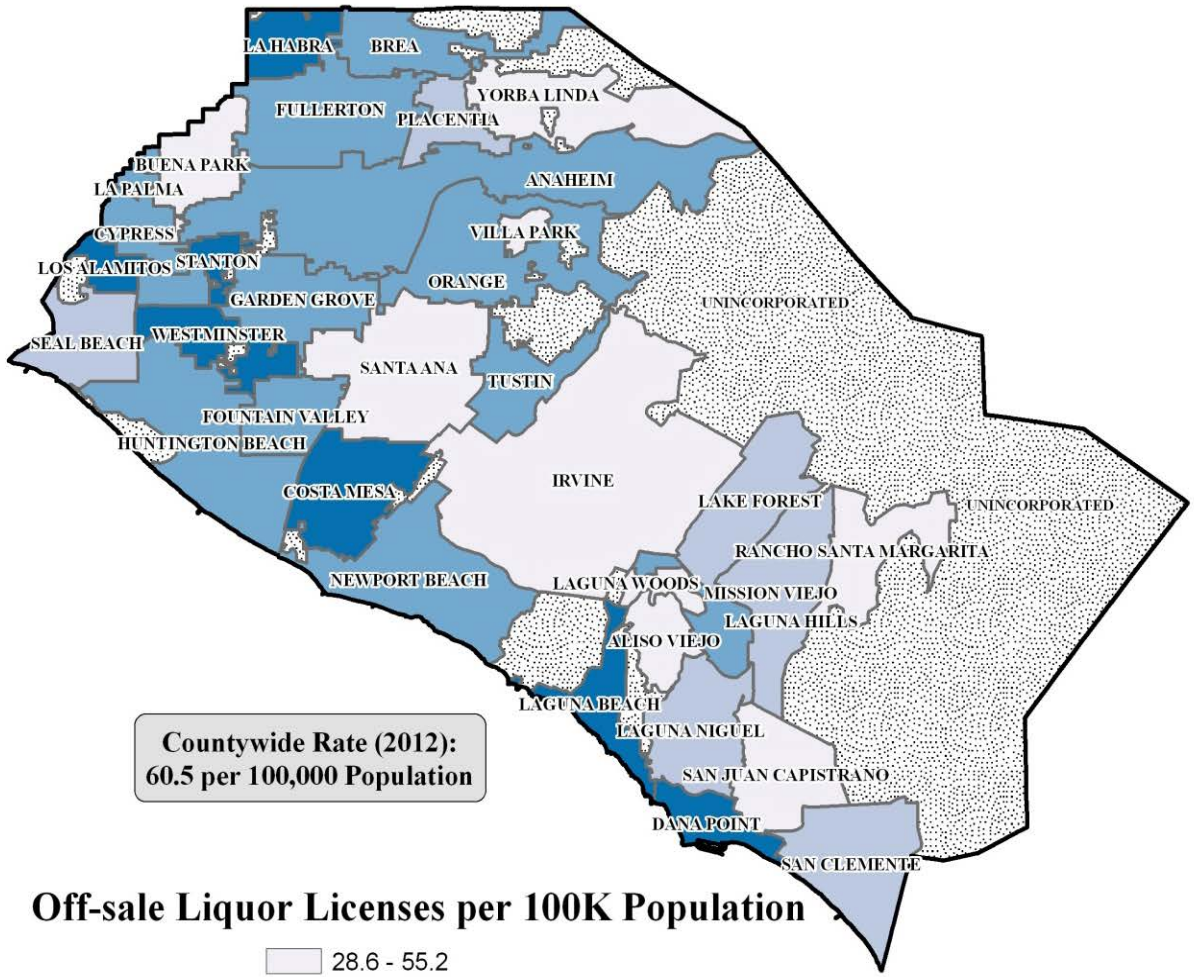
Healthy People 2020 Goal: No comparable goal.



City	Off-Sale Liquor Licenses per 100,000 population
Aliso Viejo	28.6
Laguna Woods	30.4
Yorba Linda	33.4
Villa Park	34.1
Rancho Santa Margarita	35.2
Irvine	36.2
San Juan Capistrano	42.8
Santa Ana	51.5
Buena Park	55.2
Mission Viejo	56.2
Lake Forest	56.3
Laguna Niguel	56.5
Placentia	56.7
Seal Beach	57.4
San Clemente	59.1
Orange County	60.5
Garden Grove	61.4
Tustin	64.0
Anaheim	64.5
Brea	65.9
Newport Beach	66.2
Cypress	68.3
Laguna Hills	68.7
Orange	68.8
La Palma	70.0
Huntington Beach	70.6
Fountain Valley	75.2
California	76.0
Fullerton	80.0
Dana Point	80.1
Westminster	80.5
Laguna Beach	82.7
Costa Mesa	88.4
La Habra	90.3
Los Alamitos	95.1
Stanton	96.0

Source: California Alcohol Beverage Control

Orange County Liquor Stores per 100,000 Population



Source: California Alcohol Beverage Control; California Department of Finance

References

Crowded Living Conditions

1. Krieger J and Higgins DL. Housing and health: Time again for public health action. Am J Public Health 2002; 92:758–768.
2. Leventhal T and Newman S. Housing and child development. Children and Youth Services Review 2010; 32(9):1165-1174.
3. Newman S. Does housing matter for poor families? A critical summary of research and issues still to be resolved. Journal of Policy Analysis and Management 2008; 27(4): 895-925.

Park Access

4. Kahn EB, et al. The effectiveness of interventions to increase physical activity: a systematic review. Am J Prev Med 2002; 22(4S):73-107.
5. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA 2004;291:1238-1245. Correction JAMA 2005; 293(3):298.
6. Jakicic JM and Otto AD. Physical activity considerations for the treatment and prevention of obesity. Am J Clin Nutr 2005; 82(S):226S–229S.

Healthy Food Availability

7. Michimi A and Wimberly MC. Associations of supermarket accessibility with obesity and fruit and vegetable consumption in the conterminous United States. Int J Health Geogr. 2010;8:9:49.
8. Morland K, et al. Supermarkets, other food stores, and obesity. The Atherosclerosis Risk in Communities Study. Am J Prev Med 2006;30:333-9.
9. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA 2004;291:1238-1245. Correction JAMA 2005; 293(3):298.
10. American Institute for Cancer Research/World Cancer Research Fund. Policy and Action for Cancer Prevention. Food, Nutrition, and Physical Activity: a Global Perspective. Washington DC: AICR, 2009.

Alcohol Outlet Density

11. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA 2004; 291(10):1238-1245.
12. Popova S, et al. Hours and days of sale and density of alcohol outlets: Impacts on alcohol consumption and damage: A systematic review. Alcohol & Alcoholism 2009;44(5);500-516.

Crime and Public Safety

Violent Crime

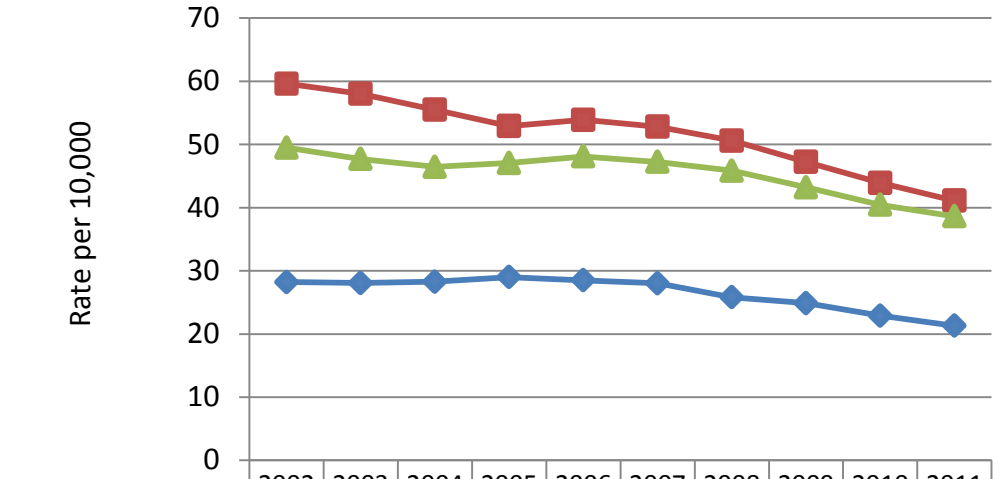
Impact: In 2011, there were **6,509 violent crimes**, for a rate of 21.3 per 10,000 population.

Description of Indicator: This indicator measures the number of violent crimes, including murder and non-negligent manslaughter, forcible rape, robbery, and aggravated assault, reported to the Department of Justice per 10,000 population.

Importance of Indicator: Victims of crime, especially violent crime, often experience severe psychological distress and mental health problems. Fear of crime, without actually being a victim, can also lead to stress, depression, and sleeping difficulties. Fear of crime may also contribute to becoming overweight because those who fear going out in their neighborhood may be more sedentary [1, 2].

Healthy People 2020 Goal: No comparable goal.

Violent Crime Rates, 2002-2011



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Orange County	28.2	28.1	28.3	29.0	28.5	28.0	25.8	24.9	22.9	21.3
CA	59.6	58.0	55.5	52.9	53.9	52.8	50.6	47.2	43.9	41.1
US	49.5	47.7	46.5	47.1	48.1	47.2	45.9	43.2	40.5	38.6

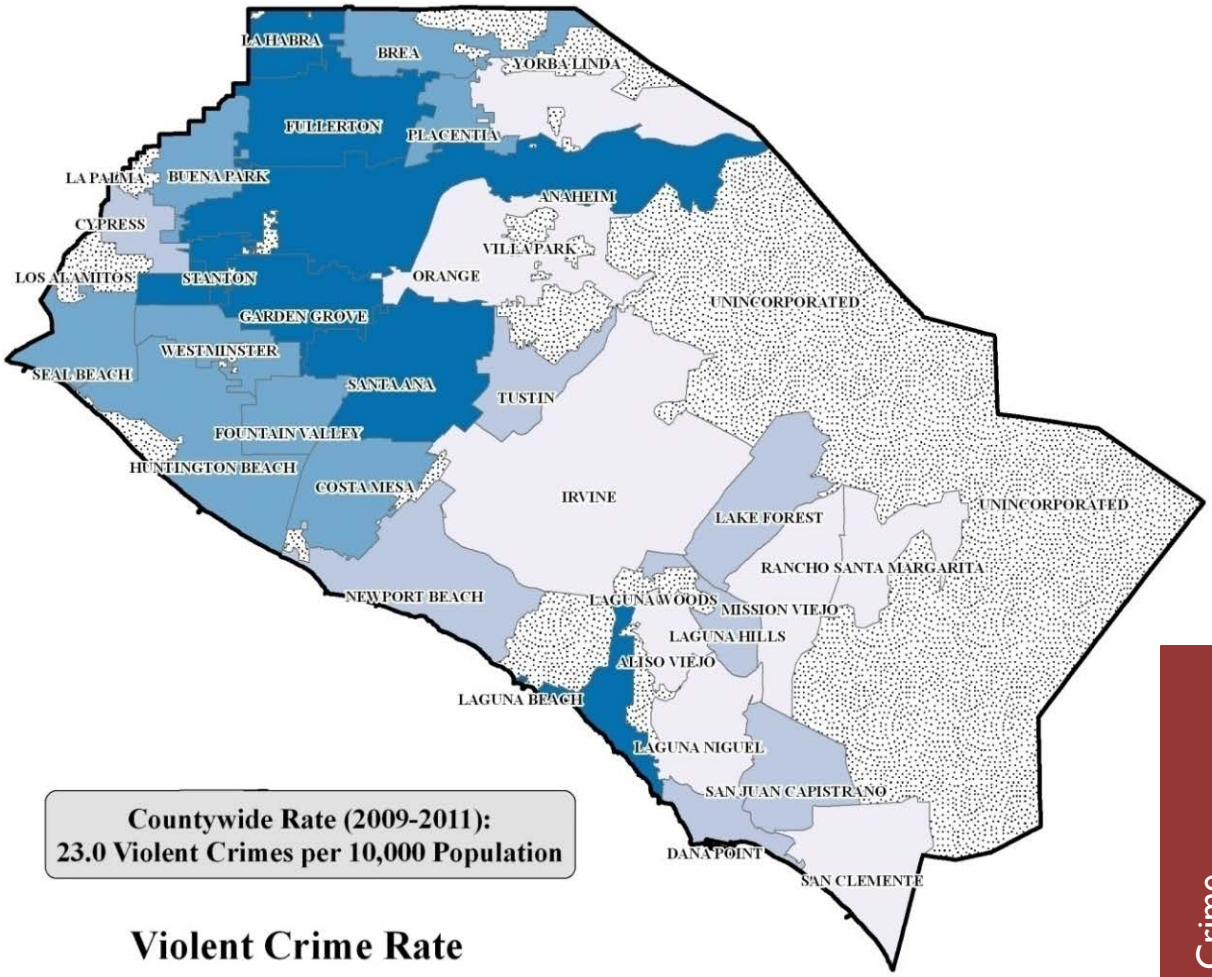
Comparison by Race/Ethnicity not indicated.

Comparison by Age Group not indicated.

Source: California Department of Justice, US Department of Justice – FBI

City	Violent Crimes per 10,000 Population, 2009-2011
Cities larger than 200K	
Irvine	6.2
Anaheim	35.9
Santa Ana	46.7
Cities between 100 and 199K	
Orange	11.4
Huntington Beach	21.6
Costa Mesa	23.5
Garden Grove	29.8
Fullerton	31.0
Cities between 50 and 99K	
Laguna Niguel	6.9
Yorba Linda	8.2
Mission Viejo	8.7
San Clemente	9.7
Lake Forest	12.5
Tustin	14.0
Newport Beach	14.0
Placentia	17.2
Fountain Valley	18.0
Westminster	28.7
Buena Park	29.7
La Habra	31.5
Cities under 50K	
Rancho Santa Margarita	5.6
Aliso Viejo	7.2
Laguna Hills	14.0
Cypress	14.8
San Juan Capistrano	15.4
Dana Point	16.6
Brea	16.7
Seal Beach	17.7
Laguna Beach	33.2
Stanton	37.7
La Palma	Estimate unstable
Laguna Woods	Estimate unstable
Los Alamitos	Estimate unstable
Villa Park	Estimate unstable

Orange County Violent Crime (2009-2011)
Violent Crimes per 10,000 Population



Countywide Rate (2009-2011):
23.0 Violent Crimes per 10,000 Population

Violent Crime Rate

- 5.6 - 11.4
- 11.5 - 16.6
- 16.7 - 29.7
- 29.8 - 46.7
- Data missing or unstable

Source: 2009-2011 US Department of Justice, US Census Bureau

Homicides

Impact: In 2010, there were **67 homicide deaths** (46 among males and 21 among females), for a rate of 2.1 per 100,000 population.

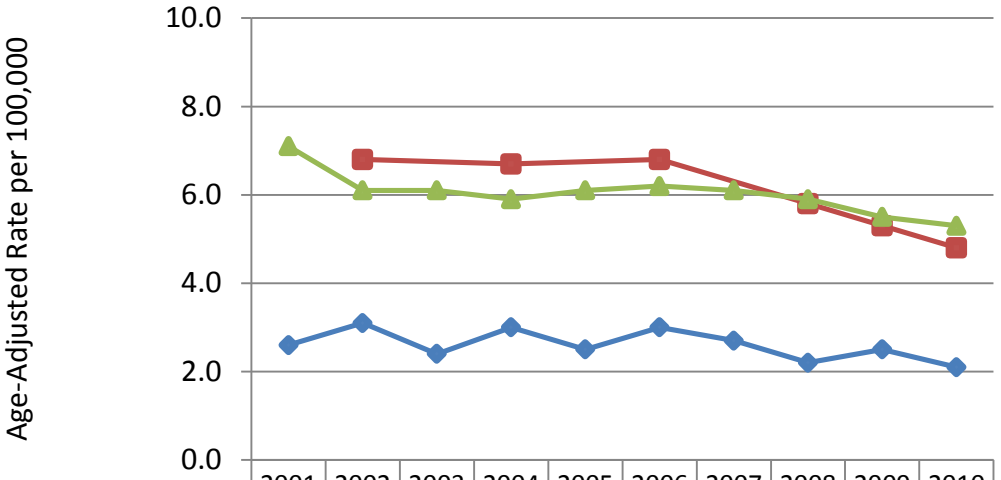
Description of Indicator: This indicator measures the rate of deaths per 100,000 population due to homicides based on the Orange County Master Death File. Ten-year trends adjust for age while rates by race/ethnicity are crude.

Importance of Indicator: Since 1965, homicide has consistently been among the top 20 leading causes of death in the United States [3]. Though homicide rates have decreased, disparities still exist particularly among males and females and different age and racial/ethnic groups [4,5]. The majority of homicides involved the use of a firearm and were precipitated primarily by arguments and interpersonal conflicts or in conjunction with another crime [5].

Healthy People 2020 Goal [LHI]: Not comparable with data shown.

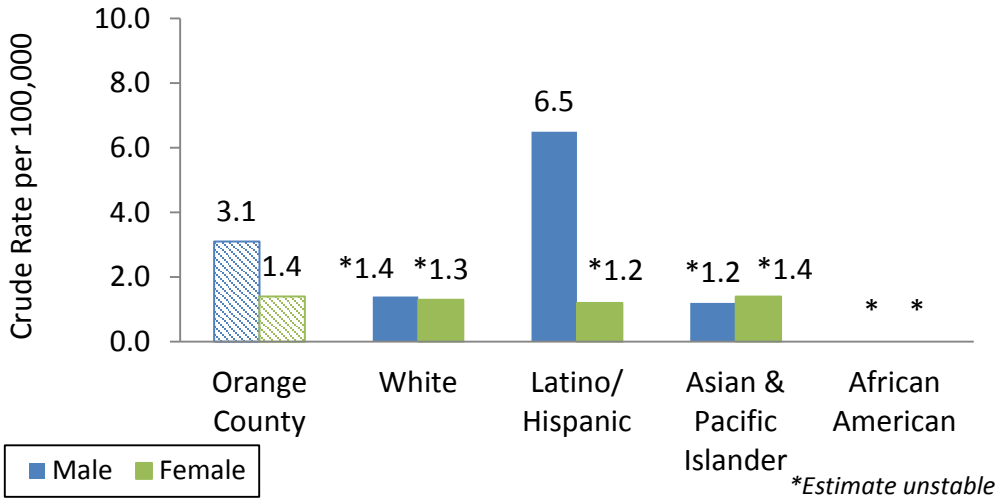
Technical Note: *Sub-county geographic detail is not shown due to unstable estimates based on small numbers.*

Homicides, 2001-2010

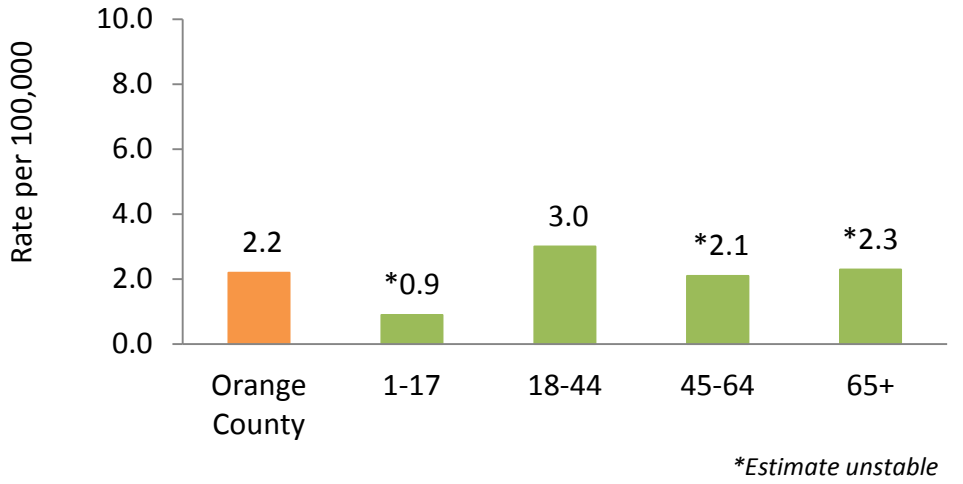


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	2.6	3.1	2.4	3.0	2.5	3.0	2.7	2.2	2.5	2.1
CA		6.8		6.7		6.8		5.8	5.3	4.8
US	7.1	6.1	6.1	5.9	6.1	6.2	6.1	5.9	5.5	5.3

Homicides by Race/Ethnicity and Gender, Orange County, 2010



Homicides by Age Group, Orange County, 2010



Source: OC Master Death File; California Master Death File; CDC WONDER

Intimate Partner Abuse

Impact: In 2009, ***4.9%** of adults in Orange County reported experiencing abuse by an intimate partner in the past year.

Description of Indicator: This indicator measures the proportion of adults, 18 years and older, who report they have experienced physical or sexual violence by an intimate partner in the past year as reported through the California Health Interview Survey.

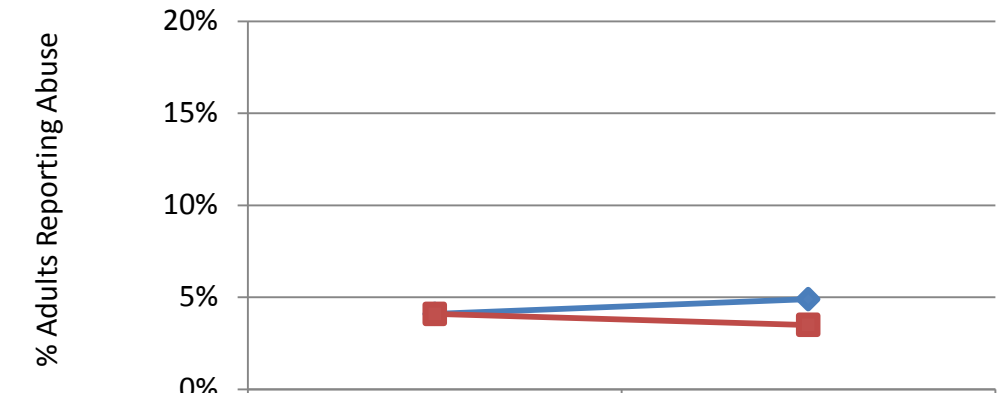
Importance of Indicator: As many as a third of women are abused by an intimate partner over their lifetime [6]. Adolescents living in households in which intimate partner violence occurs are more likely to suffer from substance abuse, engage in risky sexual behaviors, and have academic difficulties [6]. Children in such households are less likely to be properly immunized or access clinical check-ups, and are more likely to visit the emergency room [6].

Healthy People 2020 Goal: (Developmental – no target set for goal) Reduce violence by current or former intimate partners.

Technical Note: *Sub-county geographic detail is not available.*

**Estimate unstable*

Intimate Partner Abuse, 2007-2009

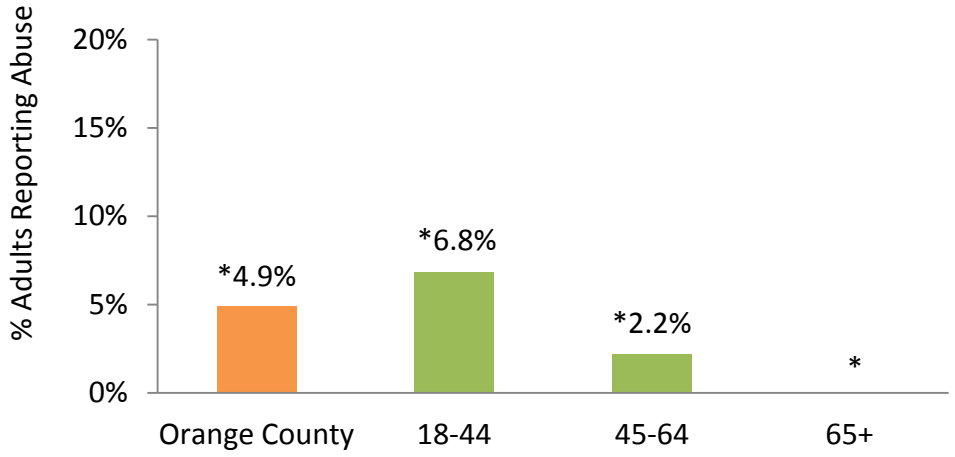


	2007	2009
Orange County	4.1%	* 4.9%
CA	4.1%	3.5%

**Estimate unstable*

Comparison by Race/Ethnicity not available.

Intimate Partner Abuse by Age Group, Orange County, 2009



**Estimate unstable*

Source: California Health Interview Survey

Alcohol-Related Motor Vehicle Deaths

Impact: In 2011, there were **47 deaths** due to alcohol-related motor vehicle crashes, for a rate of 1.6 per 100,000 population.

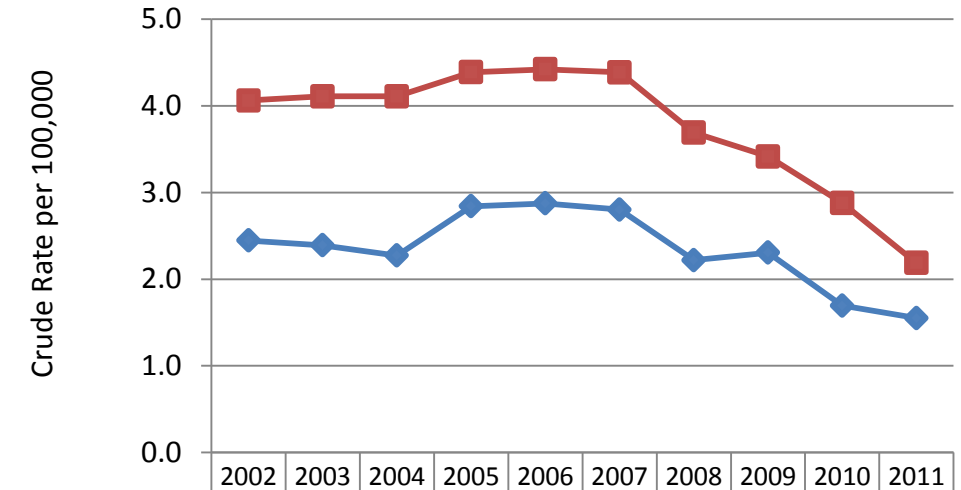
Description of Indicator: This indicator measures the number of alcohol-related motor vehicle fatalities per 100,000 population as reported through the Statewide Integrated Traffic Records System.

Importance of Indicator: In 2010, over 10,000 people died from alcohol-related motor vehicle crashes in the United States and 1 in 3 motor vehicle crash deaths involves a drunk driver [7]. Alcohol-related motor vehicle crashes cost the United States $51 billion annually [7].

Healthy People 2020 Goal: No comparable goal.

Technical Note: *Sub-county geographic detail is not available.*

Alcohol-Related Motor Vehicle Deaths, 2002-2011



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Orange County	2.4	2.4	2.3	2.8	2.9	2.8	2.2	2.3	1.7	1.6
CA	4.1	4.1	4.1	4.4	4.4	4.4	3.7	3.4	2.9	2.2

Comparison by Race/Ethnicity not available.

Comparison by Age Group not available.

Source: Statewide Integrated Traffic Records System (SWITRS)

References

Violent Crime

1. Fish J, et al. Association of perceived neighborhood safety on body mass index. American Journal of Public Health 2010;100(11):2296-2303.
2. Robinson F and Keithley J. The impacts of crime on health and health services: A literature review. Health, Risk and Society 2000;2(3):online.

Homicides

3. Murphy SL, et al. Final Data for 2010. National Vital Statistics Reports; vol 61 no 4. Hyattsville, MD: National Center for Health Statistics. 2013.
4. Najem GT, et al. Youth homicide racial disparities: gender, years, and cause. J Natl Med Assoc 2004;96:558-66.
5. Karch DL, et al. Surveillance for violent deaths – National Violent Death Reporting System, 16 States, 2007. MMWR 2010;59(No. SS-4).

Intimate Partner Abuse

6. Bair-Merritt M, Intimate Partner Violence, Pediatr Rev. 2010 April ; 31(4): 145–150. doi:10.1542/pir.31-4-145.

Alcohol-Related Motor Vehicle Deaths

7. Dept. of Transportation (US), National Highway Traffic Safety Administration (NHTSA). Traffic Safety Facts 2010: Alcohol-Impaired Driving. Washington (DC): NHTSA; 2012.

This page intentionally left blank.

Health Care Access and Utilization

Health Insurance Coverage

Impact: In 2011, **82.7% of Orange County's residents** are estimated to be covered by health insurance.

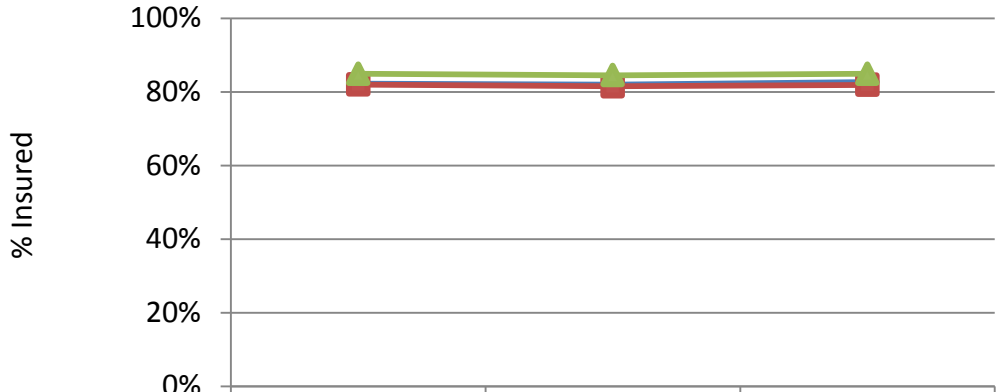
Description of Indicator: This indicator measures the proportion of residents who reported having health insurance coverage as determined by the U.S. Census Bureau.

Importance of Indicator: Individuals who are insured tend to have better access to health care, and therefore have better health than those who do not. For individuals without health insurance, health problems and disease tend to be identified later and they are less likely to receive good treatment [1]. Children with health insurance are more likely to have a place for regular medical care, more likely to visit their doctor, more likely to use health care services, and less likely to use an emergency room as their primary source of medical care than children who are not covered by health insurance [2].

Healthy People 2020 Goal [LHI]: Increase the proportion of persons with medical insurance from 83.2%in 2008 to 100%.

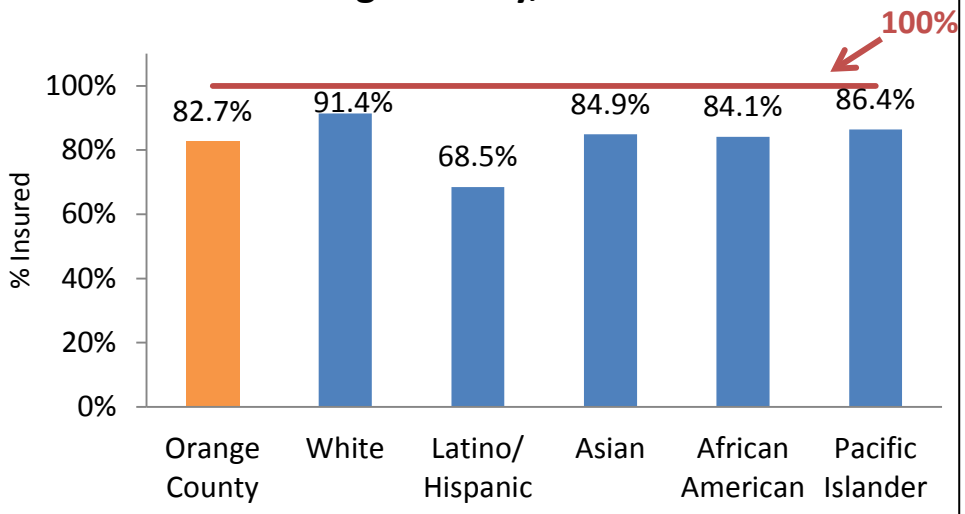
Indicates Healthy People 2020 Goal

Proportion of Individuals with Health Insurance Coverage, 2009-2011

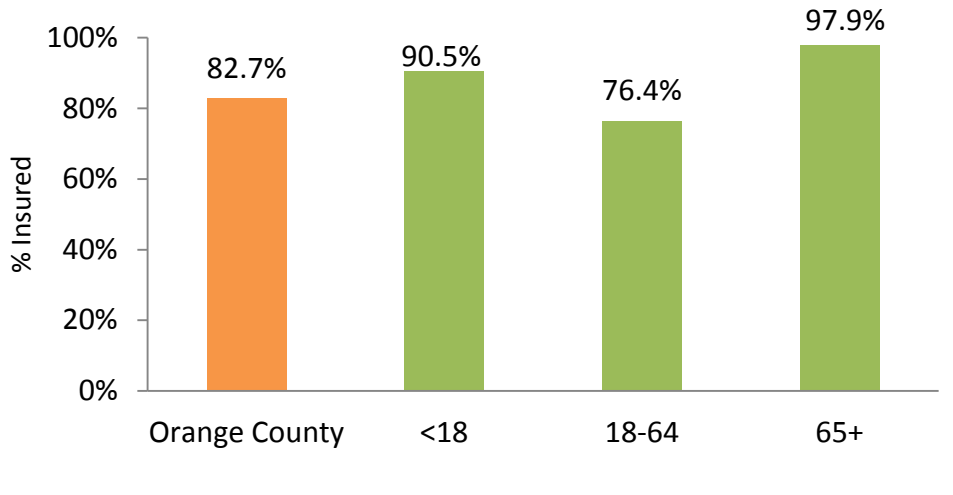


	2009	2010	2011
Orange County	82.2%	82.0%	82.7%
CA	82.0%	81.5%	81.9%
US	84.9%	84.5%	84.9%

Health Insurance by Race/Ethnicity, Orange County, 2011



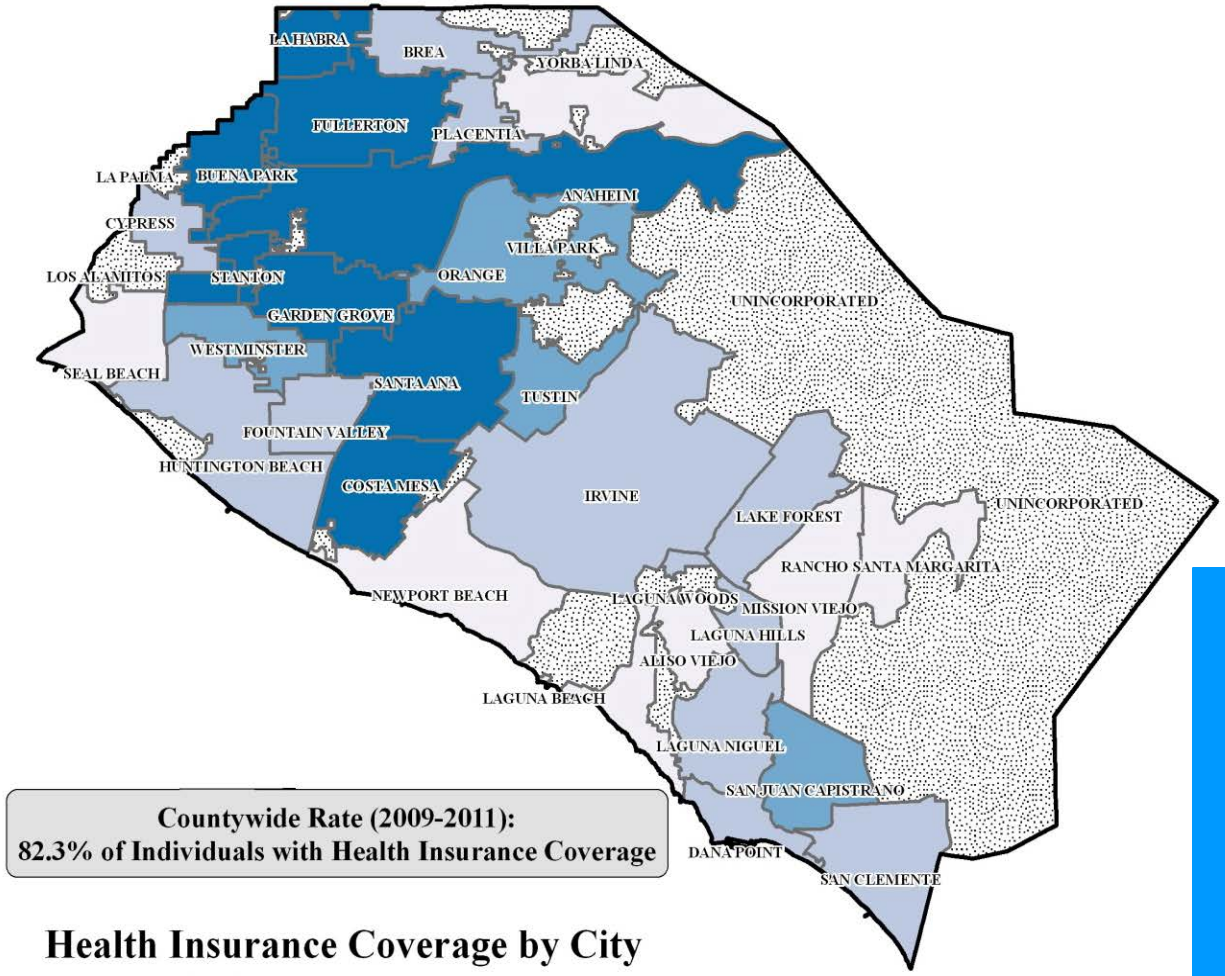
Health Insurance Coverage by Age Group, Orange County, 2011



Source: US Census American Community Survey

City	% with Health Insurance, 2009-2011
Seal Beach	93.5%
Laguna Beach	92.7%
Rancho Santa Margarita	92.0%
Newport Beach	91.8%
Mission Viejo	91.3%
Aliso Viejo	90.5%
Irvine	90.2%
Laguna Niguel	90.0%
Fountain Valley	89.7%
Brea	89.4%
San Clemente	89.3%
Lake Forest	87.6%
Dana Point	87.4%
Huntington Beach	86.9%
Laguna Hills	86.5%
Cypress	85.1%
United States	84.8%
Placentia	83.3%
Orange County	82.3%
Westminster	82.1%
California	81.8%
Orange	81.3%
Tustin	81.1%
San Juan Capistrano	80.8%
Buena Park	80.0%
Fullerton	79.7%
La Habra	77.8%
Garden Grove	77.5%
Costa Mesa	77.3%
Anaheim	77.0%
Stanton	71.9%
Santa Ana	65.7%
Laguna Woods	Estimate unstable
La Palma	Estimate unstable
Los Alamitos	Estimate unstable
Villa Park	Estimate unstable

Orange County Health Insurance Status (2009-2011)
% of Individuals with Health Insurance Coverage



Countywide Rate (2009-2011):
82.3% of Individuals with Health Insurance Coverage

Health Insurance Coverage by City

- 65.7 - 80.0
- 80.1 - 82.3
- 82.4 - 90.2
- 90.3 - 94.5
- Data missing or unstable

Source: 2009-2011 US Census Bureau, American Community Survey

Medically Underserved Areas and Populations (MUAs/MUPs)

Impact: In 2013, there was **1 Medically Underserved Area (MUA) and 4 Medically Underserved Populations (MUPs)** in Orange County.

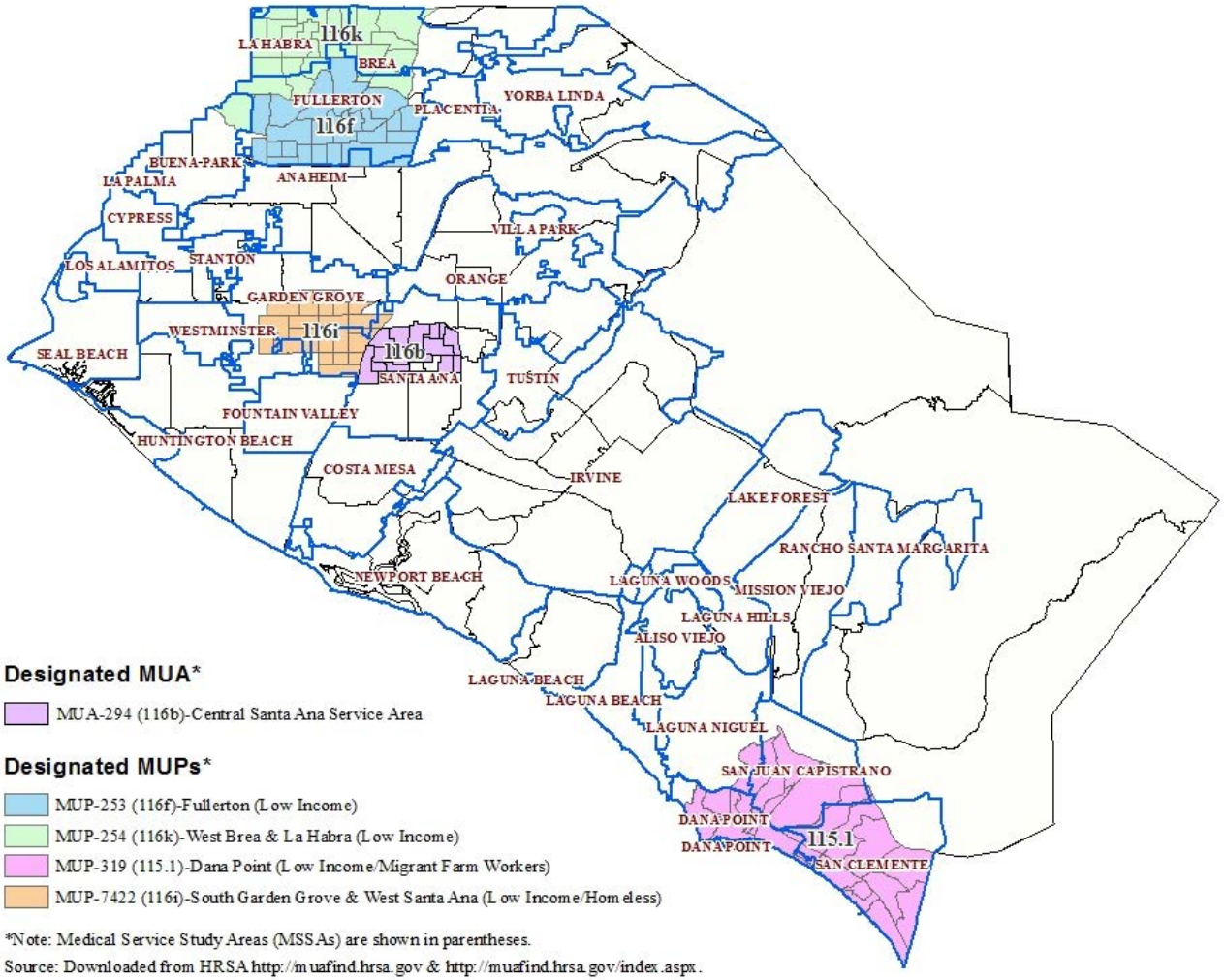
Description of Indicator: MUAs and MUPs are designated by the Health Resources and Services Administration using the Index of Medical Underservice (IMU). The IMU is calculated based on: 1) ratio of primary medical care physician per 1,000 population, 2) infant mortality rate; 3) percentage of the population living under the poverty level; and 4) percentage of the population age 65 or over.

MUAs are defined through the application of the IMU to data on a service area to obtain the score for the area. Service areas with an IMU of 62 or less on a scale of 0 to 100 are designated as a MUA.

MUPs are defined through the application of the IMU to data on an underserved population group within an area of residence. Populations eligible for this designation are low-income and/or Medicaid eligible populations, migrant farm workers, linguistically isolated groups, homeless, or residents of public housing. Population groups with an IMU of 62 or less on a scale of 0 to 100 are designated as a MUP; population groups with scores 62 or over may be designated as a MUP if they meet other specified qualifications.

Importance of Indicator: Having a primary care provider has been associated with improved health outcomes related to cancer, heart disease, stroke, infant mortality, and life expectancy [3]. A designation of MUA or MUP indicates a demonstrated shortage of personal health care services in those areas or population groups and qualifies community health centers and physicians serving the area or group to apply for designated federal and state benefits.

Healthy People 2020 Goal: No comparable goal.



Source: Health Resources and Services Administration at http://muafind.hrsa.gov

Health Professional Shortage Areas (HPSAs)

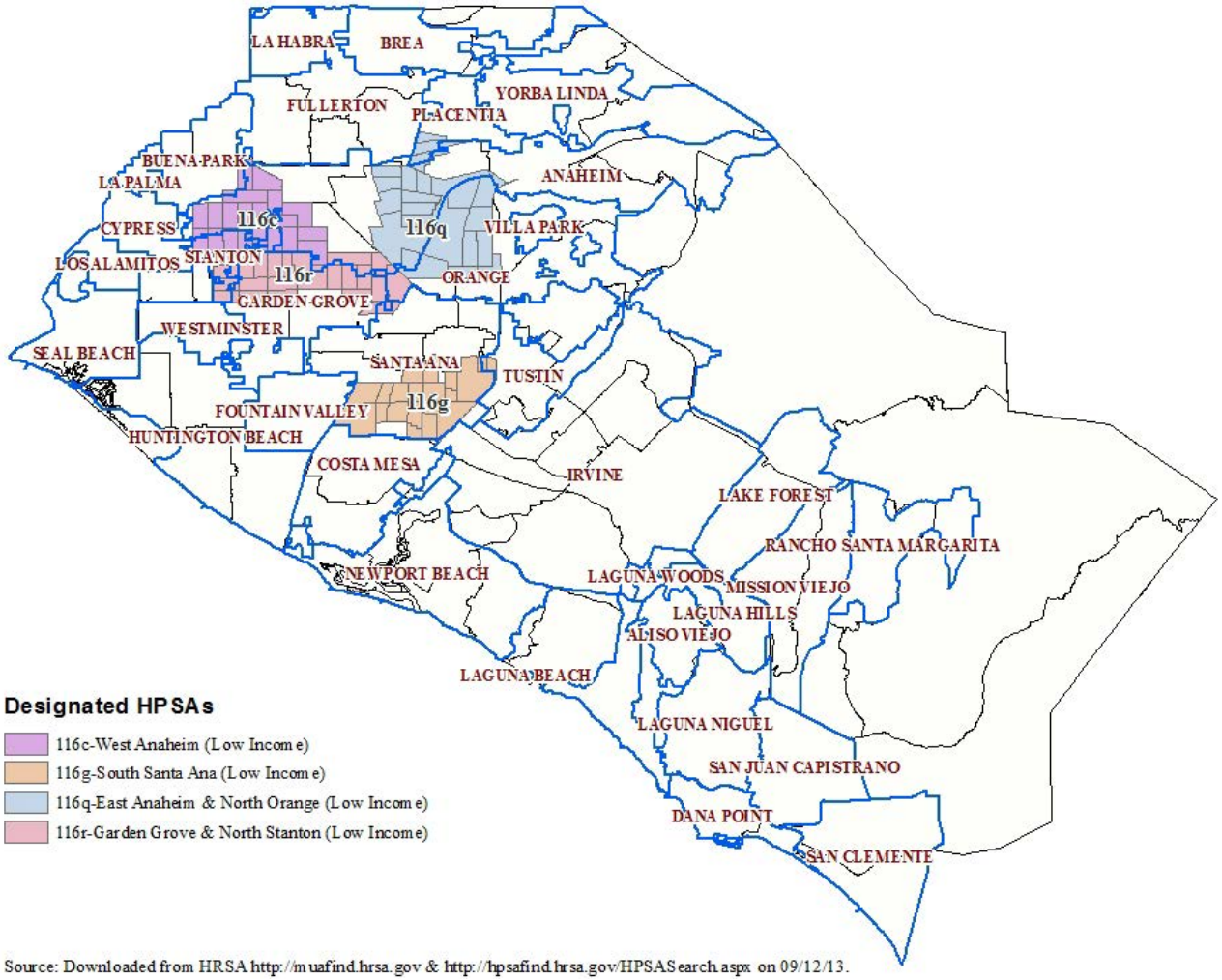
Impact: In 2013, there were **4 population groups*** designated as Health Professional Shortage Areas (HPSAs) for primary medical care in Orange County.

Description of Indicator: HPSAs are designated by the Health Resources and Services Administration. Populations eligible for this designation are low-income populations (living below 200% of poverty level) or specialty populations (Medicaid populations below poverty level, specific ethnic group, homeless, or migrant farm workers). In general, population groups are designated as a HPSA if: 1) the region is a rational area for the delivery of medical care; 2) there are barriers that prevent access to primary care; and 3) the ratio of the number of people in the population group to the number of primary care physicians serving the group is at least 3,000 to 1.

Importance of Indicator: Having a primary care provider has been associated with improved health outcomes related to cancer, heart disease, stroke, infant mortality, and life expectancy [4]. A designation of HPSA indicates a population group that has a significant shortage of health care personnel and qualifies community health centers or physicians in the area to apply for designated federal and state benefits [5].

Healthy People 2020 Goal: No comparable goal.

*Note: There are 3 different types of HPSA designations (geographic area, population group, or facility) and they are granted in 3 disciplines (primary medical care, dental care, and mental health care). In Orange County, no geographic areas were designated as HPSAs for primary medical care, dental care, or mental health care. Four (4) population groups received HPSA designations for primary medical care (as shown) and no population groups received HPSA designations for dental care or mental health care. There were 9 primary medical care, 7 dental care, and 7 mental health care facilities that received HPSA designations (not shown).



Source: Downloaded from HRSA http://muafind.hrsa.gov & http://hpsafind.hrsa.gov/HPSASearch.aspx on 09/12/13.

Source: Health Resources and Services Administration at http://hpsafind.hrsa.gov

Leading Causes of Hospitalizations, 2010

Major Diagnosis Categories for Leading Causes of Hospitalizations in OC	Number of Hospitalizations	Crude Rate per 10,000
1. Diseases and disorders of the circulatory system	32,480	107.9
2. Diseases and disorders of the digestive system	26,133	86.8
3. Diseases and disorders of the musculoskeletal system and connective tissue	23,707	78.8
4. Diseases and disorders of the respiratory system	22,752	75.6
5. Diseases and disorders of the nervous system	16,641	55.3
6. Mental diseases and disorders	11,789	39.2
7. Infectious and parasitic disease, systemic, or unspecified sites	11,218	37.3
8. Diseases and disorders of the kidney and urinary tract	11,134	37.0
9. Diseases and disorders of the hepatobiliary system and pancreas	9,240	30.7
10. Endocrine, nutritional, and metabolic diseases and disorders	8,261	27.4

Source: 2010 OSHPD Patient Discharge Data for Orange County Residents

Leading Causes of Hospitalizations by Gender, 2010

Major Diagnosis Categories for Leading Causes of Hospitalizations among Men	Hospital-izations	Crude Rate per 10,000 Male Population
1. Diseases and disorders of the circulatory system	17,955	120.6
2. Diseases and disorders of the digestive system	11,964	80.4
3. Diseases and disorders of the musculoskeletal system and connective tissue	10,386	69.8
4. Diseases and disorders of the respiratory system	11,213	75.3
5. Diseases and disorders of the nervous system	8,285	55.6
6. Infectious and parasitic disease, systemic, or unspecified sites	5,593	37.6
7. Mental diseases and disorders	5,555	37.3
8. Diseases and disorders of the kidney and urinary tract	5,098	34.2
9. Diseases and disorders of the hepatobiliary system and pancreas	4,363	29.3
10. Endocrine, nutritional, and metabolic diseases and disorders	3,454	23.2

Major Diagnosis Categories for Leading Causes of Hospitalizations among Women	Hospital-izations	Crude Rate per 10,000 Female Population
1. Diseases and disorders of the circulatory system	14,523	95.5
2. Diseases and disorders of the digestive system	14,168	93.1
3. Diseases and disorders of the musculoskeletal system and connective tissue	13,320	87.5
4. Diseases and disorders of the respiratory system	11,539	75.8
5. Diseases and disorders of the nervous system	8,356	54.9
6. Mental diseases and disorders	6,234	41.0
7. Diseases and disorders of the kidney and urinary tract	6,036	39.7
8. Infectious and parasitic disease, systemic, or unspecified sites	5,624	37.0
9. Diseases and disorders of the hepatobiliary system and pancreas	4,876	32.0
10. Endocrine, nutritional, and metabolic diseases and disorders	4,807	31.6

Source: 2010 OSHPD Patient Discharge Data for Orange County Residents

Leading Causes of Hospitalizations by Race/Ethnicity, 2010

Major Diagnosis Categories for Leading Causes of Hospitalizations among Whites	Hospitali-zations	Crude Rate per 10,000 White Population
1. Diseases and disorders of the circulatory system	21,777	163.9
2. Diseases and disorders of the musculoskeletal system and connective tissue	17,951	135.1
3. Diseases and disorders of the digestive system	16,215	122.1
4. Diseases and disorders of the respiratory system	14,303	107.7
5. Diseases and disorders of the nervous system	10,493	79.0
6. Mental diseases and disorders	8,265	62.2
7. Infectious and parasitic disease, systemic, or unspecified sites	7,075	53.3
8. Diseases and disorders of the kidney and urinary tract	7,025	52.9
9. Diseases and disorders of the hepatobiliary system and pancreas	4,974	37.4
10. Endocrine, nutritional, and metabolic diseases and disorders	4,873	36.7

Major Diagnosis Categories for Leading Causes of Hospitalizations among Latinos/Hispanics	Hospitali-zations	Crude Rate per 10,000 Hispanic Population
1. Diseases and disorders of the digestive system	5,824	57.5
2. Diseases and disorders of the circulatory system	5,134	50.7
3. Diseases and disorders of the respiratory system	4,591	45.3
4. Diseases and disorders of the nervous system	3,461	34.2
5. Diseases and disorders of the musculoskeletal system and connective tissue	3,098	30.6
6. Diseases and disorders of the hepatobiliary system and pancreas	2,830	27.9
7. Diseases and disorders of the kidney and urinary tract	2,362	23.3
8. Infectious and parasitic disease, systemic, or unspecified sites	2,091	20.6
9. Mental diseases and disorders	2,016	19.9
10. Endocrine, nutritional, and metabolic diseases and disorders	1,920	19.0

Source: 2010 OSHPD Patient Discharge Data for Orange County Residents

Leading Causes of Hospitalizations by Race/Ethnicity (cont.), 2010

Major Diagnosis Categories for Leading Causes of Hospitalizations among Asians & Pacific Islanders (APIs)	Hospitali-zations	Crude Rate per 10,000 API Population
1. Diseases and disorders of the circulatory system	3,375	62.4
2. Diseases and disorders of the digestive system	2,721	50.3
3. Diseases and disorders of the respiratory system	2,557	47.3
4. Diseases and disorders of the nervous system	1,653	30.6
5. Diseases and disorders of the musculoskeletal system and connective tissue	1,509	27.9
6. Infectious and parasitic disease, systemic, or unspecified sites	1,382	25.6
7. Diseases and disorders of the kidney and urinary tract	1,166	21.6
8. Diseases and disorders of the hepatobiliary system and pancreas	978	18.1
9. Endocrine, nutritional, and metabolic diseases and disorders	933	17.3
10. Diseases and disorders of the female reproductive system	751	13.9

Major Diagnosis Categories for Leading Causes of Hospitalizations among African Americans	Hospitali-zations	Crude Rate per 10,000 African-American Population
1. Diseases and disorders of the circulatory system	746	169.5
2. Diseases and disorders of the respiratory system	440	100.0
3. Diseases and disorders of the digestive system	422	95.9
4. Diseases and disorders of the musculoskeletal system and connective tissue	343	78.0
5. Mental diseases and disorders	337	76.6
6. Diseases and disorders of the nervous system	326	74.1
7. Endocrine, nutritional, and metabolic diseases and disorders	231	52.5
8. Infectious and parasitic disease, systemic, or unspecified sites	212	48.2
9. Diseases and disorders of the kidney and urinary tract	207	47.0
10. Diseases and disorders of the female reproductive system	168	38.2

Source: 2010 OSHPD Patient Discharge Data for Orange County Residents

Leading Causes of Hospitalizations by Age Group, 2010

Major Diagnosis Categories for Leading Causes of Hospitalizations among Infants Under 1 Year	Hospitali-zations	Rate per 10,000 Population in the Age Group
1. Diseases and disorders of the respiratory system	1,270	341.5
2. Diseases and disorders of the digestive system	477	128.3
3. Diseases and disorders of the kidney and urinary tract	262	70.5
4. Diseases and disorders of the nervous system	257	69.1
5. Infectious and parasitic disease, systemic, or unspecified sites	208	55.9
6. Diseases and disorders of the ear, nose, mouth, and throat	207	55.7
7. Diseases and disorders of the circulatory system	198	53.2
8. Endocrine, Nutritional & Metabolic Diseases & Disorders	109	29.3
9. Factors Influencing Health Status & Other Contacts with Health Services	105	28.2
10. Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	85	22.9

Major Diagnosis Categories for Leading Causes of Hospitalizations among Ages 1-17 Years	Hospitali-zations	Rate per 10,000 Population in the Age Group
1. Diseases and disorders of the digestive system	2,260	32.3
2. Diseases and disorders of the respiratory system	2,194	31.4
3. Diseases and disorders of the nervous system	1,501	21.5
4. Mental diseases and disorders	1,395	19.9
5. Diseases and disorders of the musculoskeletal system and connective tissue	954	13.6
6. Diseases and disorders of the ear, nose, mouth, and throat	637	9.1
7. Endocrine, Nutritional & Metabolic Diseases & Disorders	527	7.5
8. Infectious & Parasitic Disease, Systemic or Unspecified Sites	518	7.4
9. Diseases and Disorders of the Skin, Subcutaneous Tissue and Breast	492	7.0
10. Myeloproliferative Disease & Disorders, and Poorly Differentiated Neoplasms	422	6.0

Source: 2010 OSHPD Patient Discharge Data for Orange County Residents

Leading Causes of Hospitalizations by Age Group (cont.), 2010

Major Diagnosis Categories for Leading Causes of Hospitalizations among Ages 18-44 Years	Hospitali-zations	Rate per 10,000 Population in the Age Group
1. Diseases and disorders of the digestive system	5,321	45.9
2. Mental diseases and disorders	4,789	41.4
3. Diseases and disorders of the musculoskeletal system and connective tissue	2,782	24.0
4. Diseases and disorders of the hepatobiliary system and pancreas	2,637	22.8
5. Diseases and disorders of the nervous system	2,577	22.3
6. Diseases and disorders of the circulatory system	2,154	18.6
7. Diseases and disorders of the female reproductive system	2,143	18.5
8. Diseases and disorders of the respiratory system	1,885	16.3
9. Endocrine, nutritional, and metabolic diseases and disorders	1,816	15.7
10. Alcohol, drug use, and alcohol/drug induced organic mental disorders	1,658	14.3

Major Diagnosis Categories for Leading Causes of Hospitalizations among Ages 45-64 Years	Hospitali-zations	Rate per 10,000 Population in the Age Group
1. Diseases and disorders of the circulatory system	9,832	128.4
2. Diseases and disorders of the digestive system	7,706	100.6
3. Diseases and disorders of the musculoskeletal system and connective tissue	7,411	96.8
4. Diseases and disorders of the respiratory system	4,895	63.9
5. Diseases and disorders of the nervous system	4,370	57.1
6. Mental diseases and disorders	3,703	48.3
7. Diseases and disorders of the hepatobiliary system and pancreas	3,622	47.3
8. Diseases and disorders of the female reproductive system	2,766	36.1
9. Diseases and disorders of the kidney and urinary tract	2,633	34.4
10. Infectious and parasitic disease, systemic, or unspecified sites	2,592	33.8

Source: 2010 OSHPD Patient Discharge Data for Orange County Residents

Leading Causes of Hospitalizations by Age Group (cont.), 2010

Major Diagnosis Categories for Leading Causes of Hospitalizations among 65 Years and Older	Hospitali-zations	Rate per 10,000 Population in the Age Group
1. Diseases and disorders of the circulatory system	19,937	570.3
2. Diseases and disorders of the respiratory system	12,508	357.8
3. Diseases and disorders of the musculoskeletal system and connective tissue	12,494	357.4
4. Diseases and disorders of the digestive system	10,369	296.6
5. Diseases and disorders of the nervous system	7,936	227.0
6. Infectious and parasitic disease, systemic, or unspecified sites	6,782	194.0
7. Diseases and disorders of the kidney and urinary tract	6,345	181.5
8. Endocrine, nutritional, and metabolic diseases & disorders	3,239	92.6
9. Diseases and disorders of the hepatobiliary system and pancreas	2,754	78.8
10. Factors influencing health status and other contacts with health services	2,561	73.3

Source: 2010 OSHPD Patient Discharge Data for Orange County Residents

Dental Visits

***Note**: Up-to-date and stable local data on individuals accessing oral health services is unavailable. Ten-year trend is for California.*

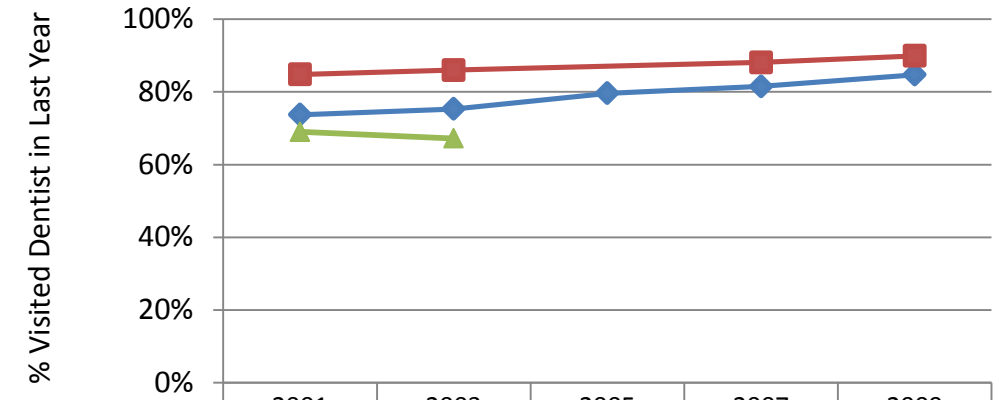
Impact: In 2007, **75.2% of adults** and **92.2% of children** in Orange County had seen a dentist in the last year.

Description of Indicator: This indicator measures the proportion of individuals who had seen a dentist in the last year as reported through the Orange County Health Needs Assessment. Ten-year trend is for California as reported through California Health Interview Survey.

Importance of Indicator: Oral health is an important part of general health and is related to systemic diseases including diabetes, heart disease, and stroke [5]. Routine dental care is an important part of a comprehensive oral health plan and has been associated with reduced need for costly acute dental care and emergency room visits [6, 7].

Healthy People 2020 Goal [LHI]: Not comparable with data shown.

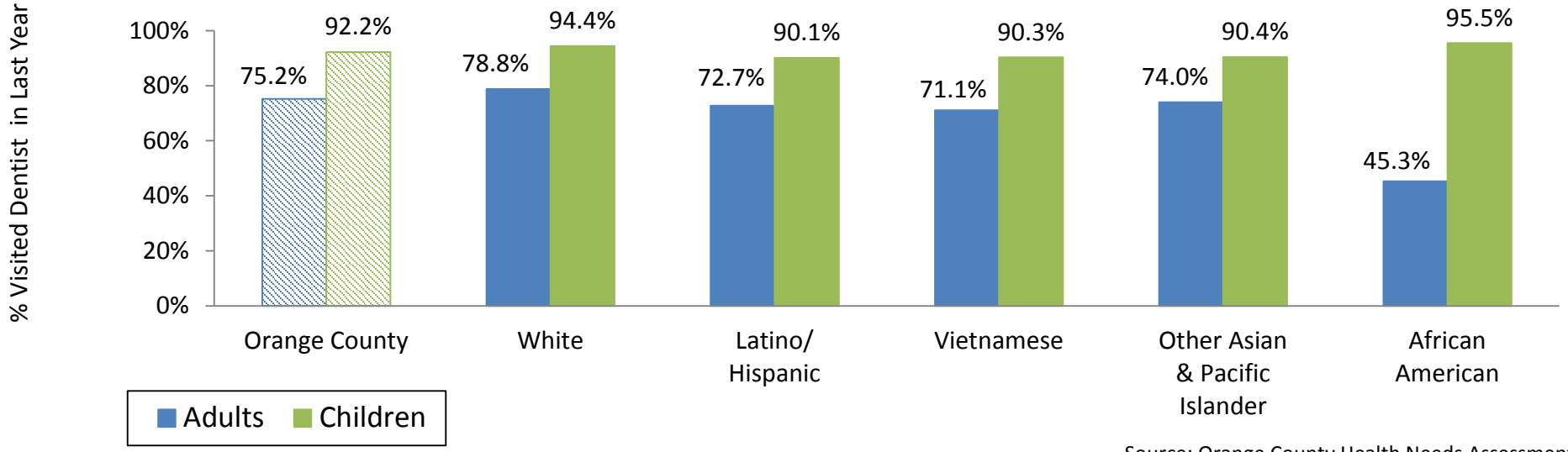
Individuals with Dental Visits in Last Year, California, 2001-2009



	2001	2003	2005	2007	2009
Child (3-11)	73.7%	75.3%	79.6%	81.5%	84.7%
Teen (12-17)	84.8%	86.0%		88.1%	89.9%
Adults (18+)	69.0%	67.2%			

Source: California Health Interview Survey

Adults and Children with Dental Visits in Last Year, Orange County, 2007



Source: Orange County Health Needs Assessment

Source: Orange County Health Needs Assessment; California Health Interview Survey

Avoidable Emergency Department Visits

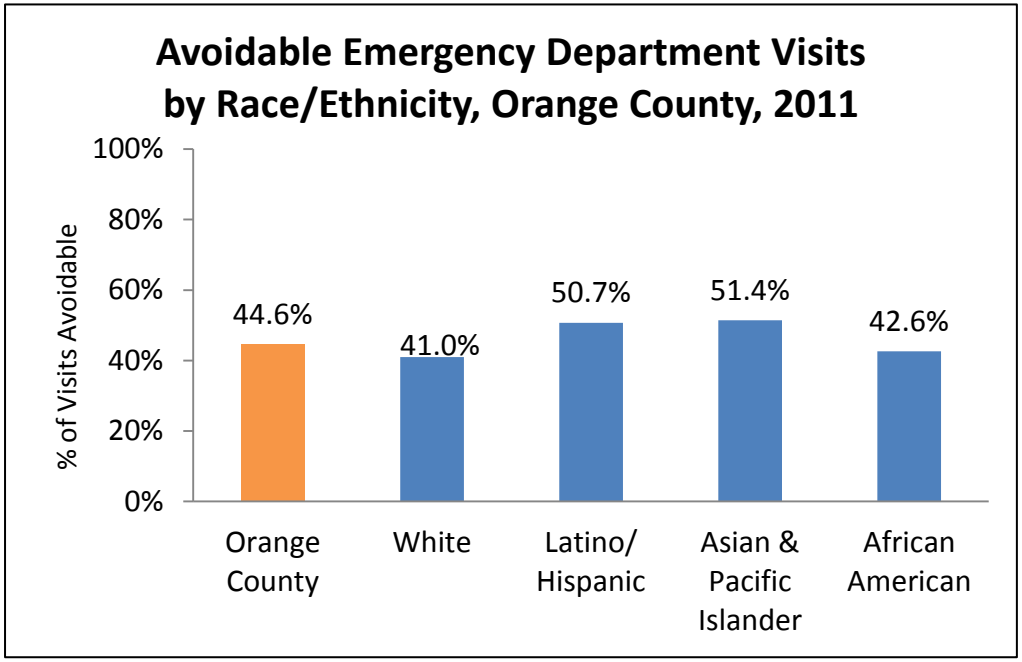
Impact: In 2006-08, **936,258 (44.6%) of emergency department (ED) visits** in Orange County were avoidable.

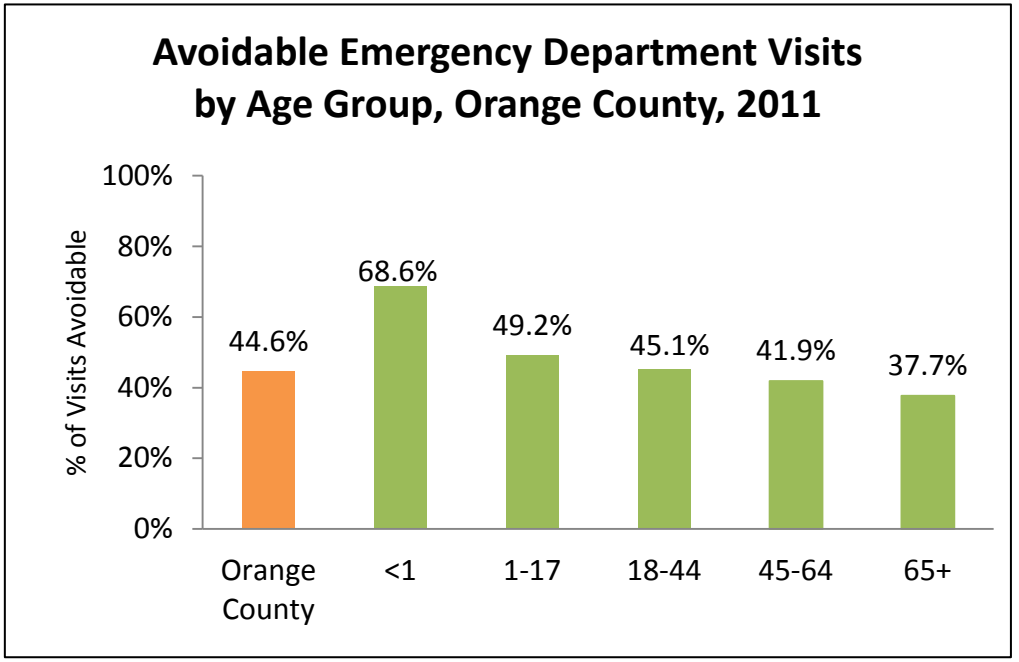
Description of Indicator: This indicator measures the proportion of ED visits made by residents that did not require immediate care, required immediate care but could have been treated in a primary care setting, and those cases that required the services of an ED, but could have been prevented with regular primary care treatment.

Importance of Indicator: EDs play a key role in the delivery of health care in Orange County. Recent closure of several EDs coupled with the increase in the uninsured in Orange County has put an increased burden on the county's safety net and hospitals have become increasingly overcrowded [8]. The increasing demand for the ED can drive up the cost of health care, with the average cost of an ED visit at $580 more than the cost of an office health care visit [9]. Overcrowding can also impact the quality of care for patients [10]. Patients with a health care home are less likely to have a costlier illness at a later date and go to the ED for health care [11, 12].

Healthy People 2020 Goal: No comparable goal.

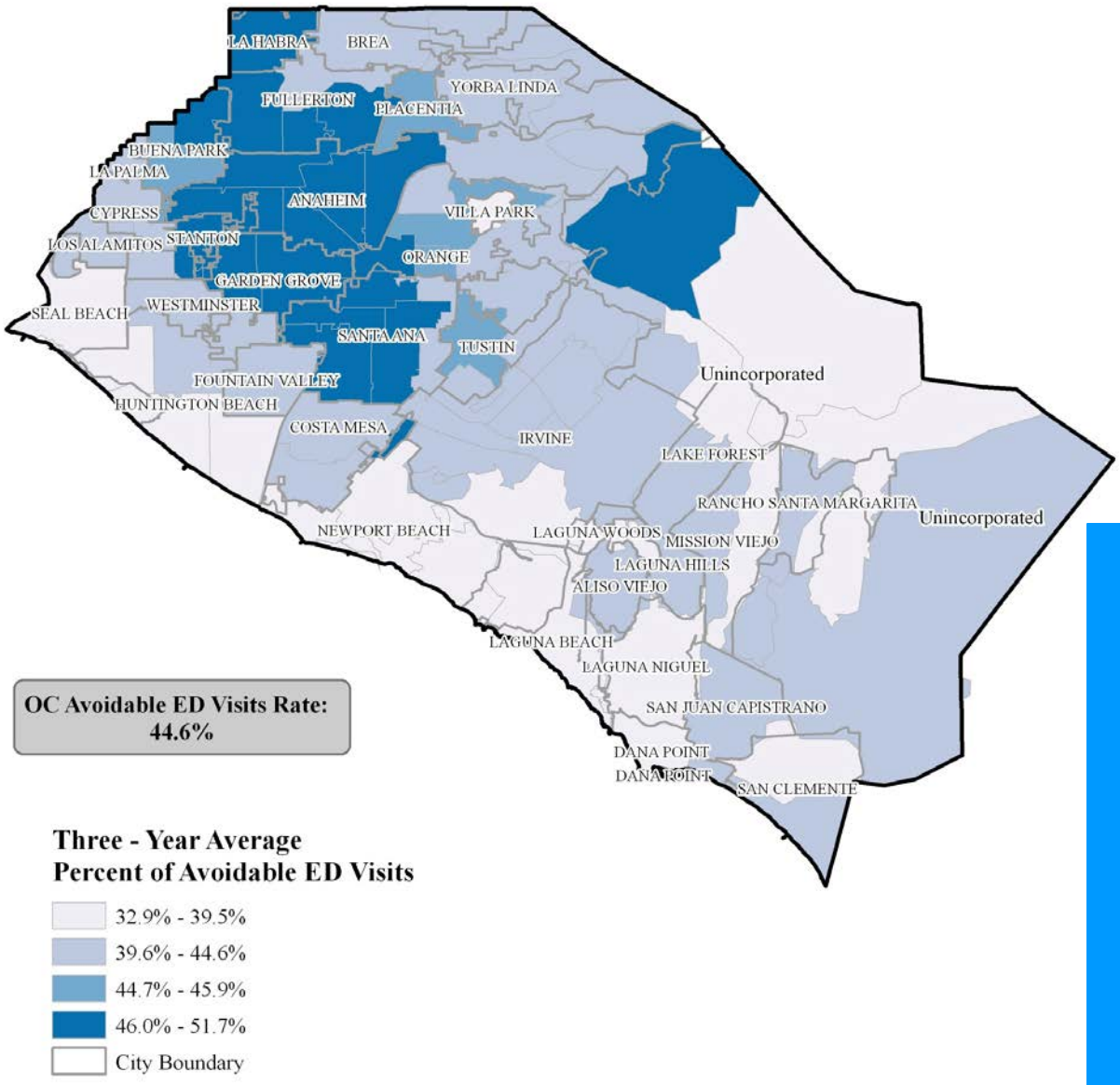
Trends over time not available.





Source: 2010 OSHPD Patient Discharge Data for Orange County Residents

City	% of ED Visits that were Avoidable, 2006-2008
Newport Beach	36.5%
Villa Park	36.7%
Laguna Woods	36.9%
Laguna Beach	38.6%
Seal Beach	38.7%
San Clemente	39.4%
Laguna Niguel	39.4%
Dana Point	39.5%
Mission Viejo	39.5%
Yorba Linda	40.1%
Huntington Beach	40.2%
Laguna Hills	40.7%
Irvine	40.7%
Los Alamitos	40.8%
Rancho Santa Margarita	41.0%
Fountain Valley	41.1%
Aliso Viejo	41.7%
San Juan Capistrano	41.9%
Lake Forest	42.0%
La Palma	42.2%
Costa Mesa	42.9%
Brea	43.1%
Cypress	43.2%
Westminster	44.2%
Orange County	44.6%
Tustin	44.8%
Orange	44.9%
Placentia	45.7%
La Habra	46.3%
Fullerton	46.9%
Garden Grove	47.4%
Buena Park	47.5%
Stanton	48.3%
Anaheim	49.2%
Santa Ana	49.7%



References

Health Insurance Coverage

1. Agency for Healthcare Research and Quality (AHRQ). 2007 National Healthcare Disparities Report. Rockville, MD: U.S. Department of Health and Human Services, Agency for Healthcare Research and Quality, 2008.
2. Bloom B, et al. Summary health statistics for U.S. children: National Health Interview Survey, 2009. National Center for Health Statistics. Vital Health Stat 10(247). 2010.

Health Care Capacity

3. Macinko J, et al. Quantifying the health benefits of primary care physician supply in the United States. International Journal of Health Services 2007;37(1):111-26.
4. US Department of Health and Human Services, Health Resources and Services Administration. Shortage Designation: Health Professional Shortage Areas & Medically Underserved Areas/Populations, Accessed 8/13. (http://www.hrsa.gov/shortage/)

Dental Visits

5. U.S. Department of Health and Human Services (HHS). Oral Health in America: A report of the Surgeon General. Rockville (MD): HHS, National Institute of Dental and Craniofacial Research, National Institutes of Health 5 Special Dental Report
6. IOM (Institute of Medicine) and NRC (National Research Council). 2011. Improving access to oral health care for vulnerable and underserved populations. Washington, DC: The National Academies Press.
7. Helen HL, et al. Visiting the emergency department for dental problems: trends in utilization, 2001 to 2008. Am J Public Health 2012;102(11):77-83.

Avoidable Emergency Department Visits

8. Emergency Department Utilization in Orange County. Orange County Health Care Agency, QM Research and Planning, Santa Ana, California. 2009.
9. Machlin, SR, Medical Expenditure Panel Survey (MEPS), Statistical Brief 111: Expenses for a Hospital Emergency Room Visit, 2003, Adjusted to 2007 Data. Rockville, MD: Agency for Healthcare Research and Quality (AHRQ), 2006. Available at www.meps.ahrq.gov/mepsweb/data_files/publications/st111/stat111.pdf Last accessed November 2010.
10. Institute of Medicine (IOM). Hospital-Based Emergency Care: At the Breaking Point. National Academy of Sciences Press, 2006.
11. Starfield B. Primary Care: Balancing Health Needs, Services, and Technology. New York: Oxford University Press. 1998.
12. Sox C, et al. Insurance or Regular Physician: Which is the Most Powerful Predictor of Health Care? Am J Public Health 1998; 88(3):364-370.

Maternal, Child, and Adolescent Health

Maternal, Child, and Adolescent Health

Related Maternal, Child, and Adolescent Health Indicators in Other Chapters

Maternal, Child, and Adolescent Health

Related Maternal, Child, and Adolescent Health Indicators in Other Chapters (cont.)

- Chronic Diseases

- Health Behaviors

Prenatal Care

Impact: In 2010, there were **34,018 women initiated prenatal care** within the first trimester in Orange County, which accounted for 89.6% of births in that year.

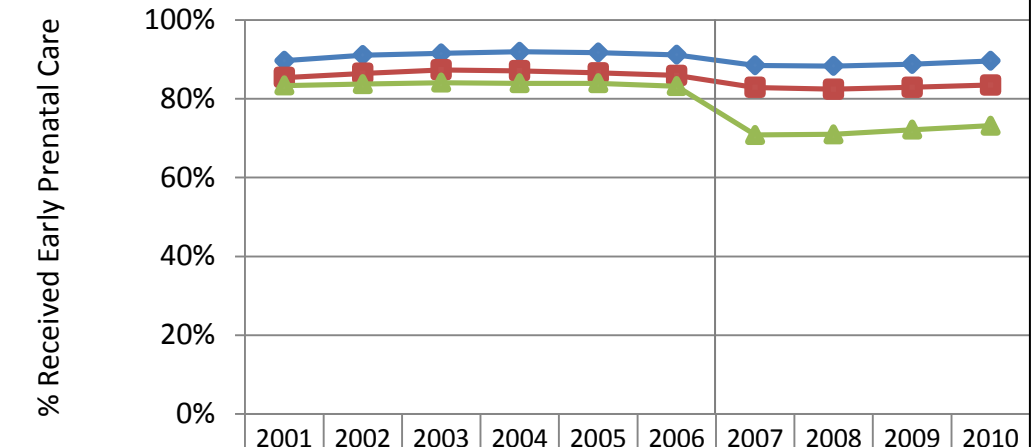
Description of Indicator: This indicator measures the percent of women who gave birth who initiated prenatal care within the first trimester of those cases where prenatal care initiation was known (99% of births) using the Orange County Master Birth File.

Importance of Indicator: Early prenatal care provides an excellent opportunity to detect and treat maternal medical problems such as anemia and diabetes [1]; it can also prevent major birth defects and increase opportunities for delivering a healthy baby [2, 3]. Mothers who receive late or no prenatal care are more likely to have babies with low birth weight, stillborn, or who die in the first year of life [1].

Healthy People 2020 Goal: Increase the proportion of pregnant women who receive prenatal care beginning in the first trimester from 70.8% of females delivering a live birth in 2007 to 77.9%.

Indicates Healthy People 2020 Goal

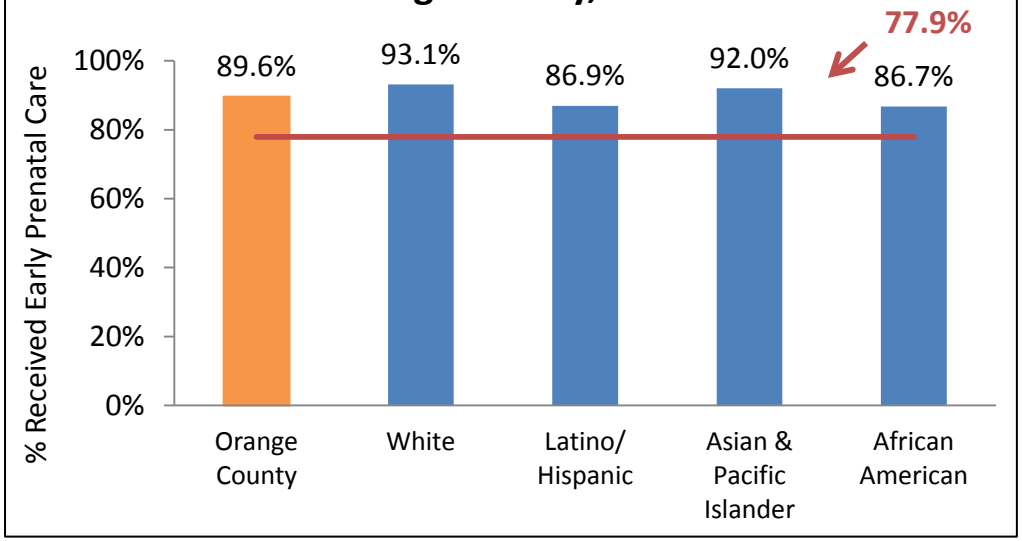
Prenatal Care , 2001-2010



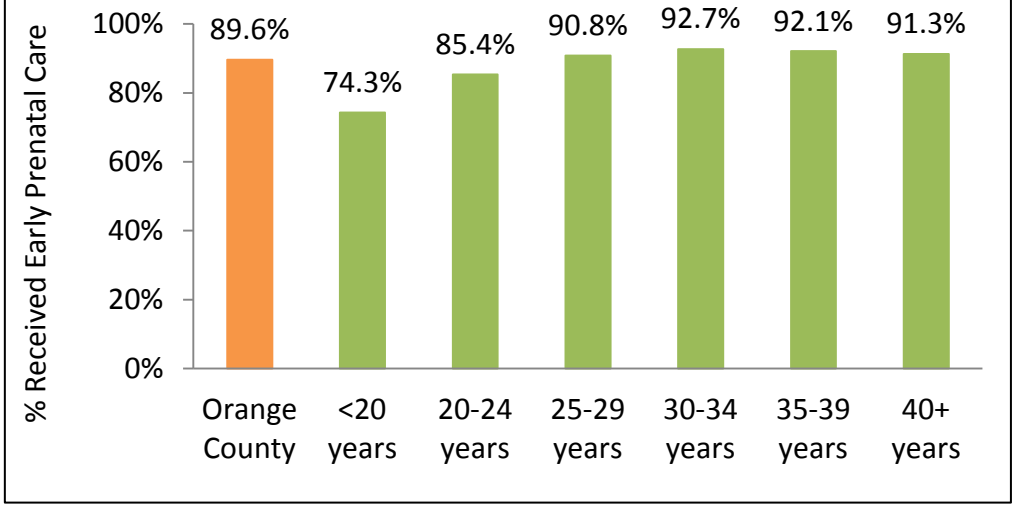
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	89.6%	91.1%	91.5%	91.9%	91.7%	91.2%	88.5%	88.3%	88.8%	89.6%
CA	85.4%	86.5%	87.3%	87.1%	86.6%	85.9%	82.9%	82.4%	82.9%	83.5%
US	83.4%	83.7%	84.1%	83.9%	83.9%	83.2%	70.8%	71.0%	72.1%	73.1%

Changes to reporting implemented in 2007; data prior to 2007 not comparable.

Prenatal Care by Race/Ethnicity, Orange County, 2010



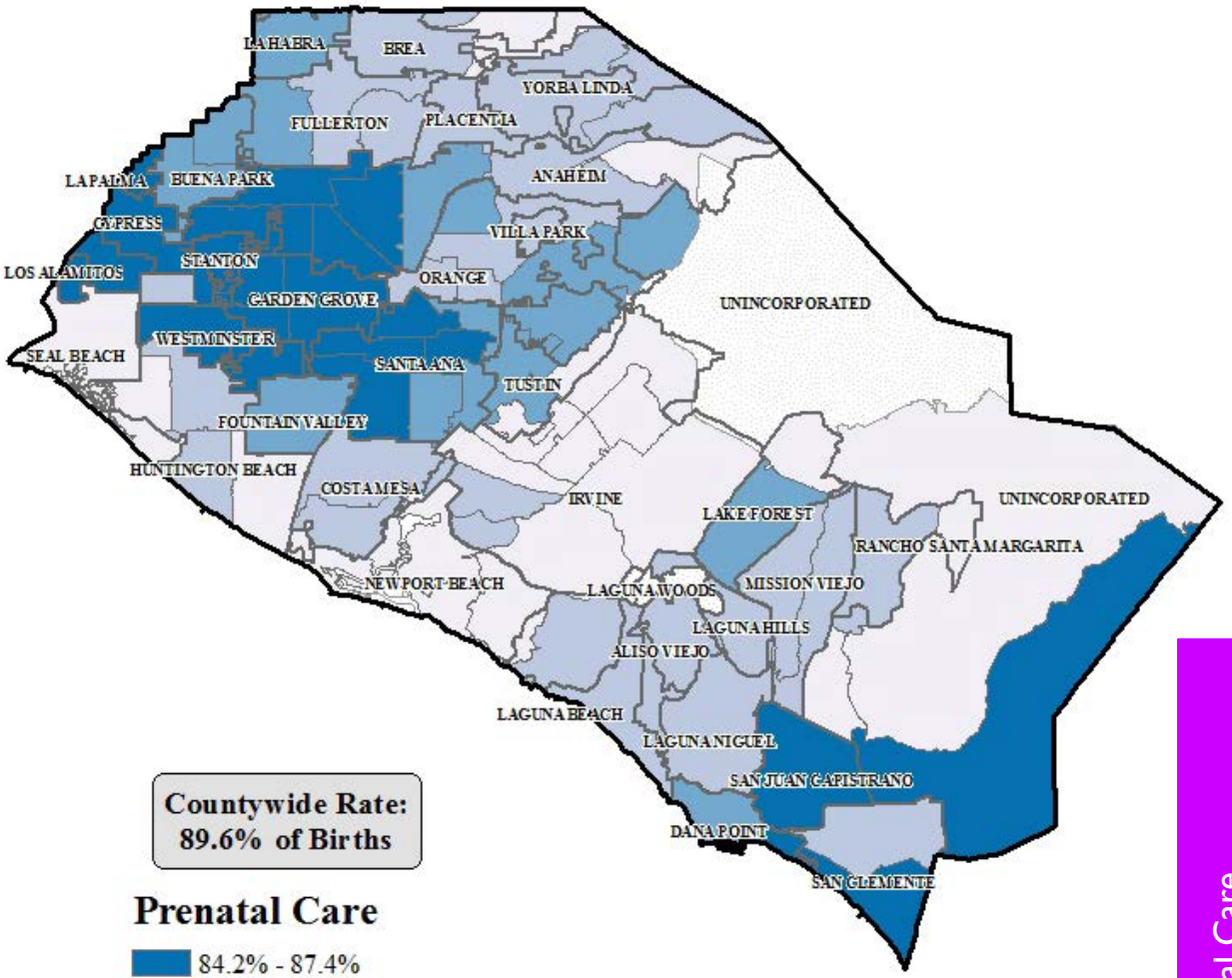
Prenatal Care by Age Group, Orange County, 2010



Source: OC Master Birth File; CDPH Vital Statistics Query System; National Vital Statistics Reports

City	% Mothers Received Early Prenatal Care, 2010
Irvine	95.5%
Newport Beach	95.0%
Aliso Viejo	94.5%
Yorba Linda	94.0%
Seal Beach	94.0%
Brea	93.5%
Rancho Santa Margarita	93.5%
Laguna Beach	93.2%
Costa Mesa	92.8%
Huntington Beach	92.4%
Laguna Niguel	92.0%
Mission Viejo	91.4%
Placentia	91.1%
Tustin	90.9%
Fullerton	90.4%
Orange	90.0%
Fountain Valley	89.7%
Orange County	89.6%
Laguna Hills	89.3%
San Clemente	88.6%
Buena Park	88.3%
La Palma	88.2%
La Habra	87.8%
Lake Forest	87.6%
Dana Point	87.5%
Anaheim	87.5%
Santa Ana	86.9%
San Juan Capistrano	86.7%
Garden Grove	86.5%
Stanton	85.9%
Los Alamitos	85.8%
Villa Park	85.7%
Westminster	85.2%
Cypress	85.0%
California	83.9%
United States	80.5%
Laguna Woods	Estimate unstable

Orange County Onset of Prenatal Care (2010)
Prenatal Care Initiated within 1st Trimester



Source: 2010 Orange County Statistical Master Birth File

Gestational Diabetes

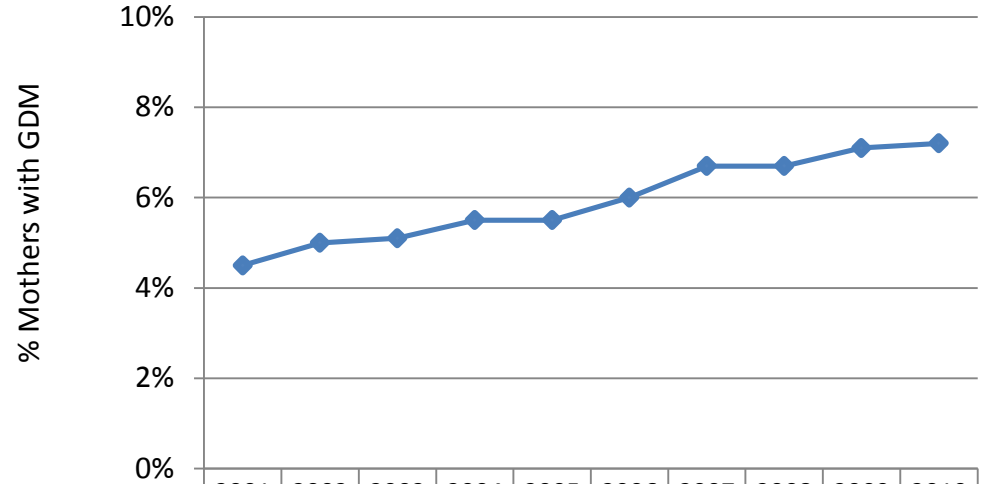
Impact: In 2010, there were **2,702 women diagnosed with gestational diabetes mellitus (GDM) who gave birth** in Orange County, which accounted for 7.2% of women who gave birth in that year.

Description of Indicator: This indicator measures the percent of women who gave birth who were diagnosed with gestational diabetes based on Office of Statewide Health Planning and Development hospital discharge database.

Importance of Indicator: The prevalence of gestational diabetes mellitus (GDM) has doubled over the past decade to 7.2%, becoming the most common prenatal complication in Orange County [4]. GDM is associated with higher maternal body mass index (BMI) [4]; and increases the likelihood of having a serious pregnancy complication , makes a cesarean section delivery more likely, and puts a woman and her child at increased risk of developing diabetes in the future [5, 6]. Early prenatal care and a healthy lifestyle, including maintaining a healthy body weight can prevent or lessen the severity [7].

Healthy People 2020 Goal: No comparable goal.

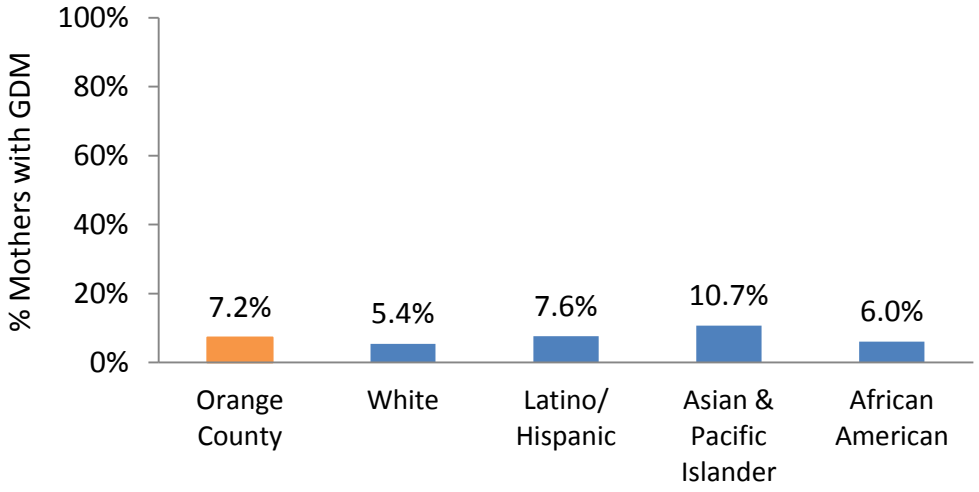
Gestational Diabetes, 2001-2010



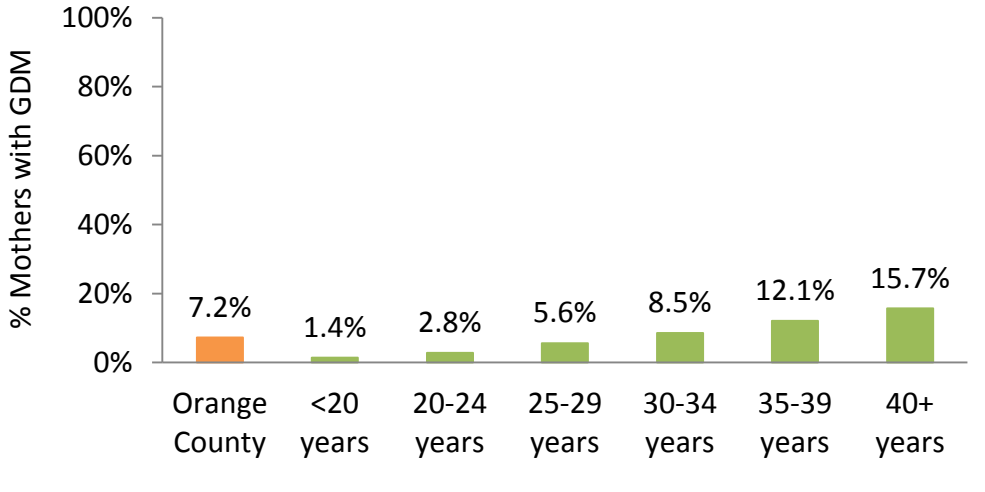
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	4.5%	5.0%	5.1%	5.5%	5.5%	6.0%	6.7%	6.7%	7.1%	7.2%

**California and US data unavailable*

Gestational Diabetes by Race/Ethnicity, Orange County, 2010



Gestational Diabetes by Age Group, Orange County, 2010

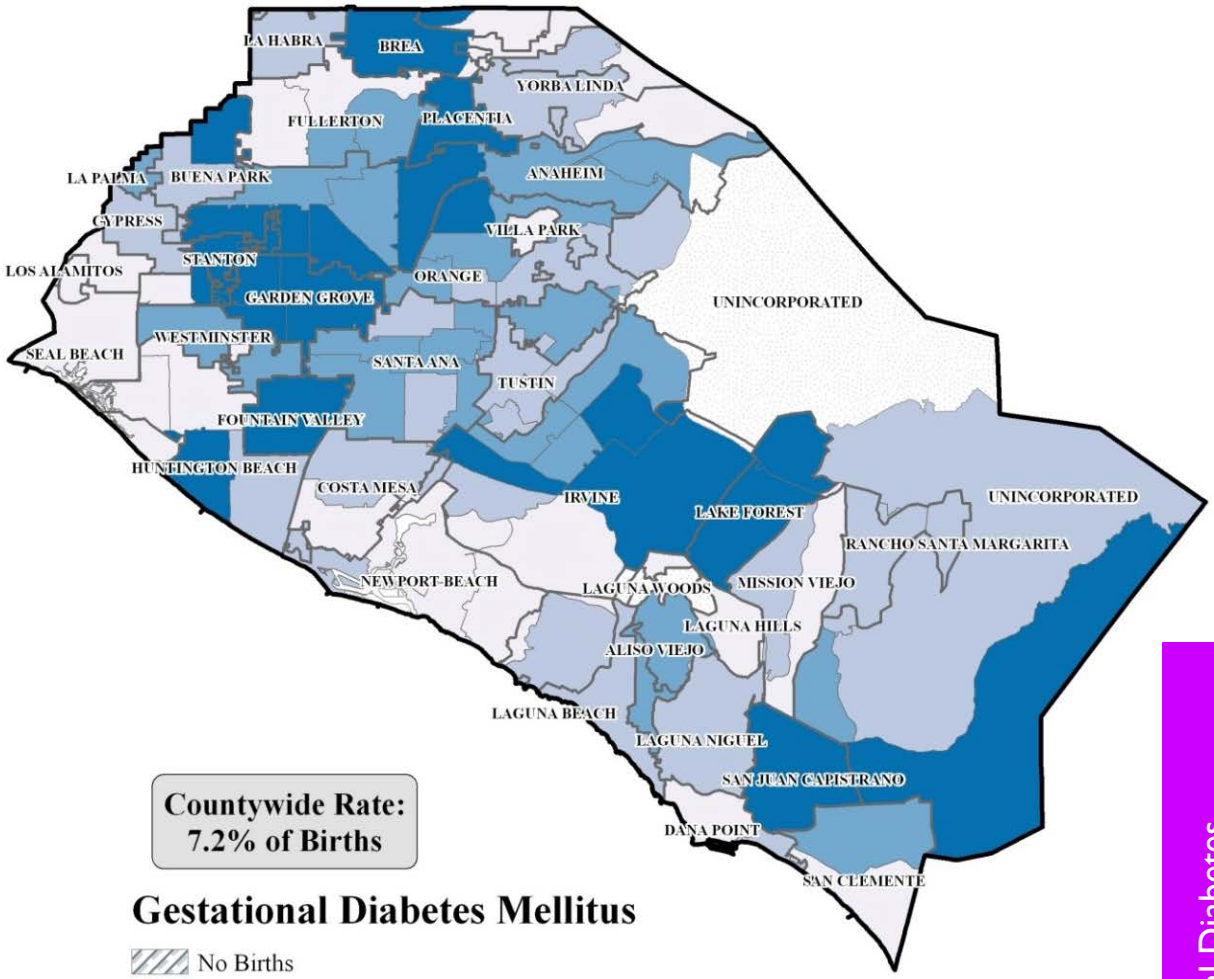


Source: Orange County Statewide Health Planning and Development

City	% Mothers with Gestational Diabetes, 2010
Laguna Woods	0.0%*
Los Alamitos	1.8%*
Dana Point	2.9%*
Seal Beach	3.1%*
Newport Beach	3.6%*
Huntington Beach	4.5%
San Clemente	5.3%
Fullerton	5.4%
La Habra	6.0%
Costa Mesa	6.0%
Laguna Hills	6.3%*
San Juan Capistrano	6.4%
Cypress	6.5%
Rancho Santa Margarita	6.5%
Laguna Beach	6.7%*
Mission Viejo	6.7%
Laguna Niguel	6.9%
Irvine	7.0%
Santa Ana	7.1%
Tustin	7.1%
Orange County	7.2%
Villa Park	7.3%
Aliso Viejo	7.3%
Orange	7.5%
Yorba Linda	7.5%
Buena Park	7.7%
Lake Forest	7.9%
La Palma	8.1%*
Westminster	8.6%
Garden Grove	8.7%
Anaheim	8.9%
Brea	9.3%
Fountain Valley	10.0%
Stanton	10.5%
Placentia	11.0%

**Estimate unstable*

Gestational Diabetes Mellitus
Orange County (2010)



Source: 2010 OSHPD Patient Discharge Data

Low Birth Weight

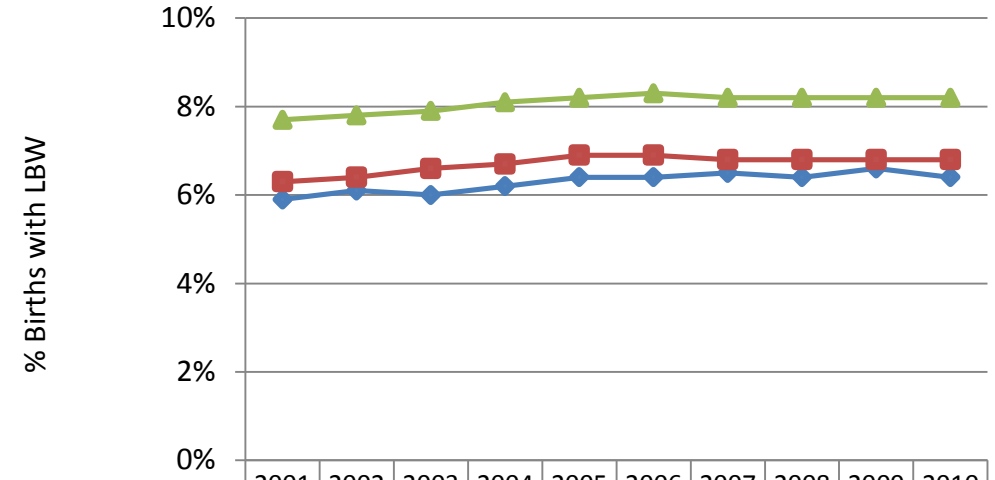
Impact: In 2010, there were **2,462 infants born with low birth weight** in Orange County, which accounted for 6% of the 38,237 births in that year.

Description of Indicator: This indicator measures the proportion of infants weighing less than 2,500 grams (5 pounds, 8 ounces) at birth and is reported as a percentage of total annual live births using the Orange County Master Birth File.

Importance of Indicator: Low birth weight (LBW) infants are at a higher risk for serious illnesses, disability, cognitive and motor development, lifelong health difficulties, and are more likely to die before their first birthday [8]. Some of the attributable causes of LBW are multiple fetuses, preterm birth, fetal growth restriction, placental factors, smoking, alcohol/drug use during pregnancy, poor nutrition, chronic stress, maternal age, socioeconomic factors, domestic violence, and maternal or fetal infections [8, 9].

Healthy People 2020 Goal: Reduce low birth weight infants from 8.2% of live births in 2007 to 7.8%.

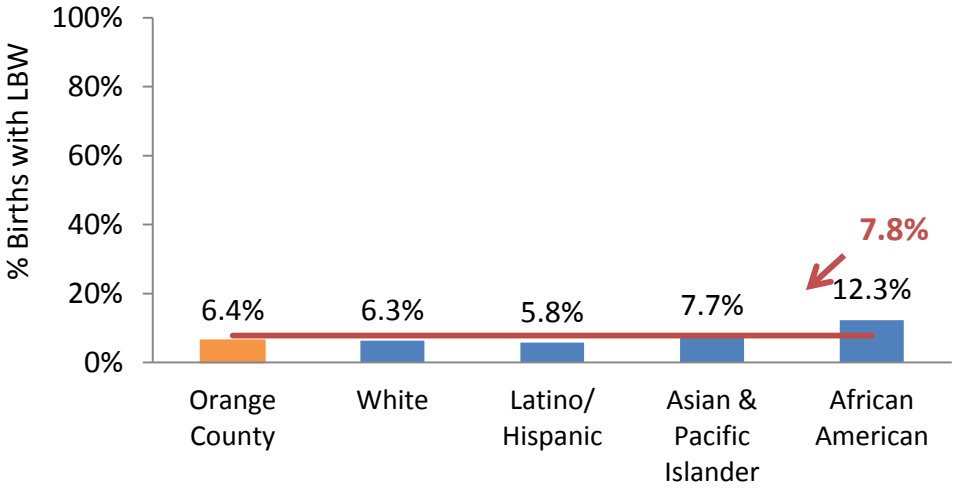
Low Birth Weight, 2001-2010



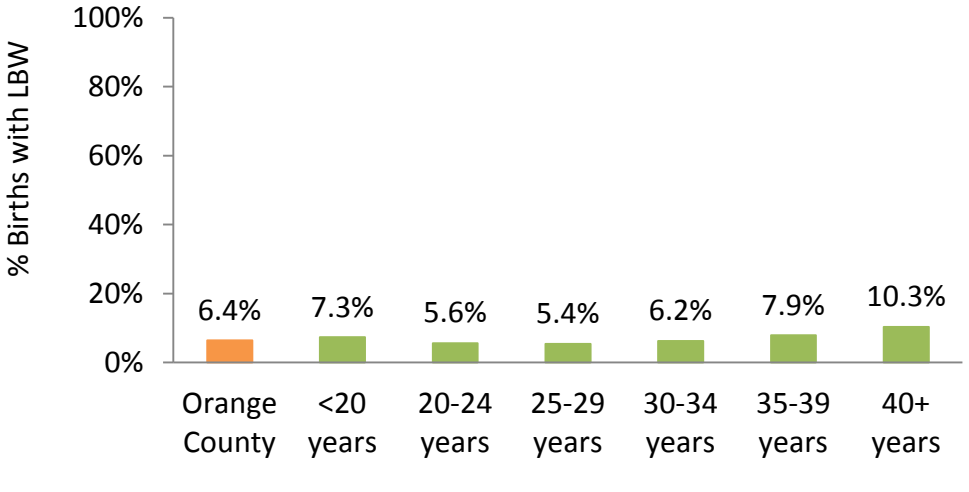
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	5.9%	6.1%	6.0%	6.2%	6.4%	6.4%	6.5%	6.4%	6.6%	6.4%
CA	6.3%	6.4%	6.6%	6.7%	6.9%	6.9%	6.8%	6.8%	6.8%	6.8%
US	7.7%	7.8%	7.9%	8.1%	8.2%	8.3%	8.2%	8.2%	8.2%	8.2%

Indicates Healthy People 2020 Goal

Low Birth Weight by Race/Ethnicity, Orange County, 2010



Low Birth Weight by Age Group, Orange County, 2010

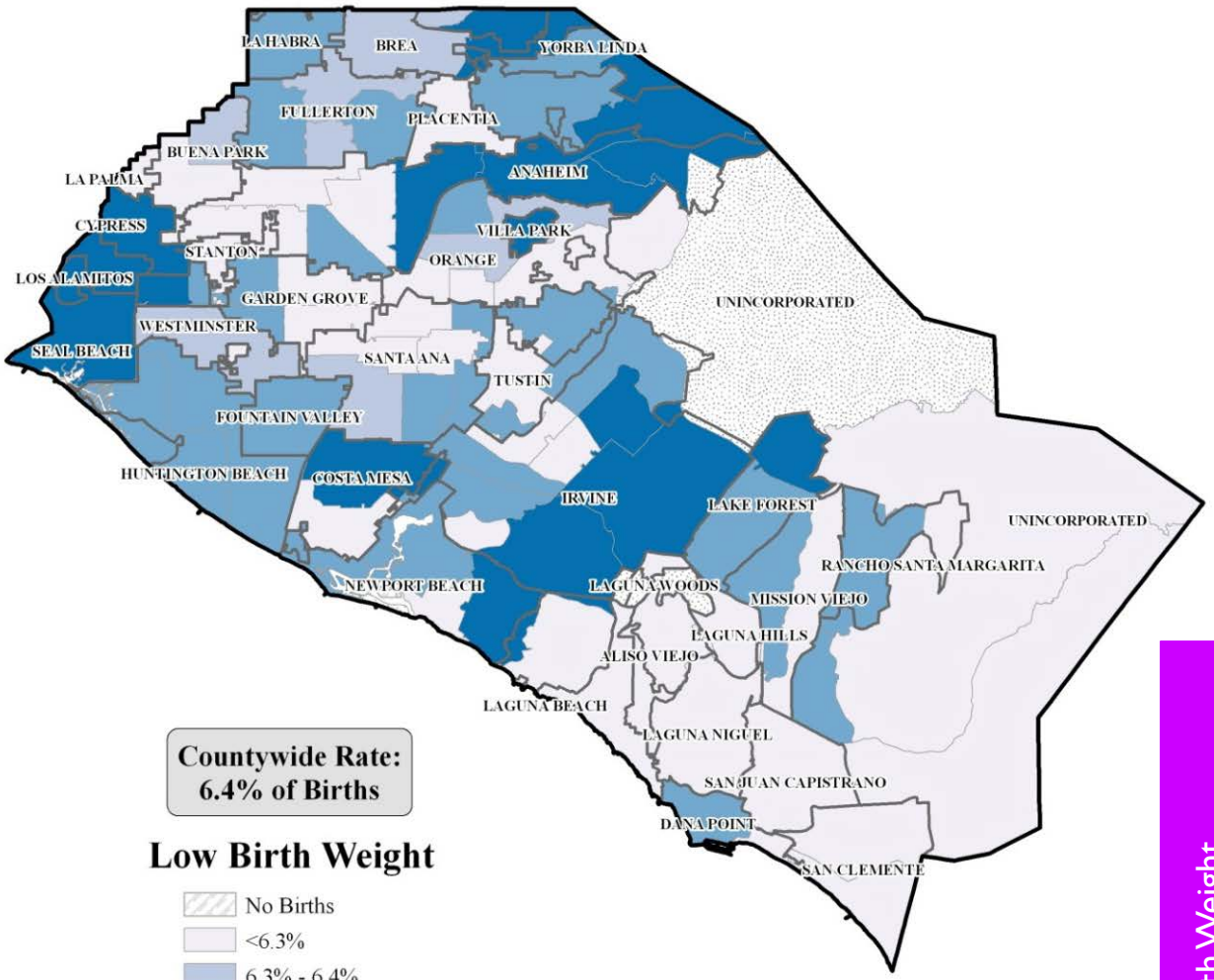


Source: OC Master Birth File; CDPH Vital Statistics Query System; National Vital Statistics Reports

City	% Births with Low Birth Weight, 2010
San Juan Capistrano	4.8%*
Laguna Hills	5.1%*
Buena Park	5.3%
Stanton	5.4%
Laguna Niguel	5.4%
San Clemente	5.4%
Laguna Beach	5.5%*
Orange	5.8%
Costa Mesa	5.9%
La Palma	6.0%*
Santa Ana	6.1%
Aliso Viejo	6.1%
Placentia	6.1%
Garden Grove	6.2%
Anaheim	6.2%
Westminster	6.2%
Orange County	6.4%
Mission Viejo	6.5%
Dana Point	6.5%*
Brea	6.7%
Tustin	6.7%
La Habra	6.8%
California	6.8%
Fullerton	6.9%
Newport Beach	7.1%
Irvine	7.1%
Huntington Beach	7.3%
Rancho Santa Margarita	7.5%
Fountain Valley	7.6%
Lake Forest	7.9%
United States	8.2%
Yorba Linda	8.6%
Cypress	8.6%
Seal Beach	10.4%
Los Alamitos	10.5%*
Villa Park	15.4%*

**Estimate unstable*

Orange County Low Birth Weight (2010)
(Birth Weight < 2,500 g)



Countywide Rate: 6.4% of Births

Low Birth Weight

- No Births
- <6.3%
- 6.3% - 6.4%
- 6.5% - 7.9%
- 8.0% - 15.4%
- Insufficient Data
- City Boundaries

Source: 2010 Orange County Statistical Master Birth File

Preterm Births

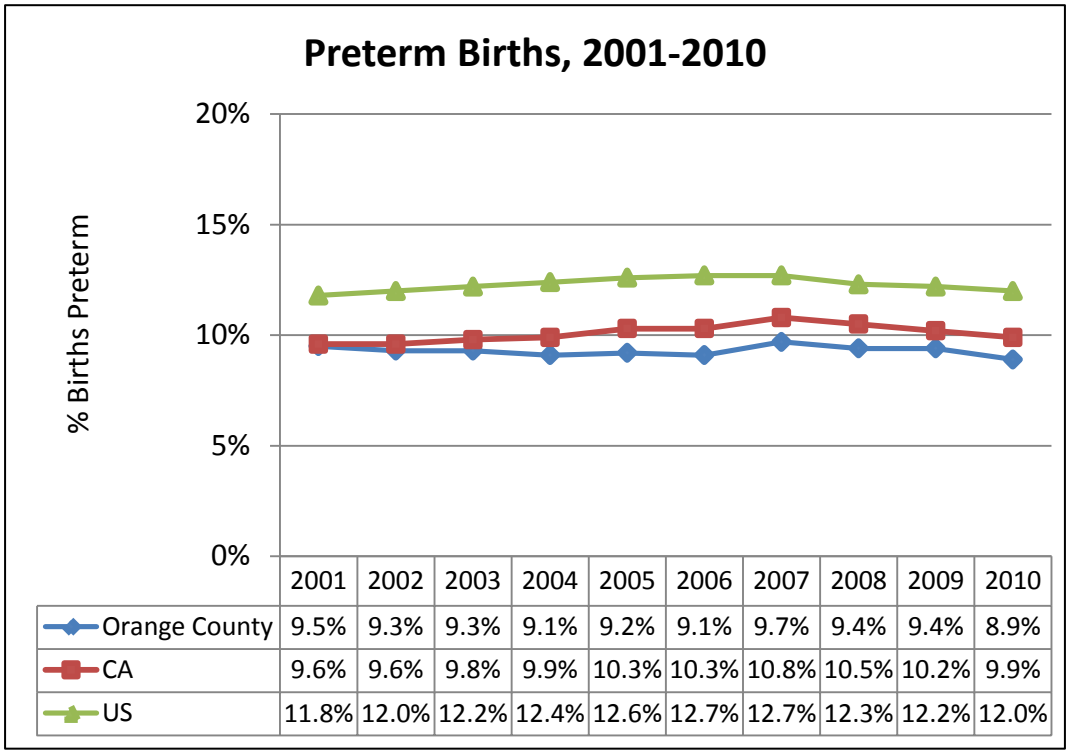
Impact: In 2010, there were **3,412 preterm births** in Orange County, which accounted for 8.9% of the 38,237 births in that year.

Description of Indicator: This indicator measures the proportion of infants born between 17 and 36 completed weeks of gestation and are reported as a percentage of total annual live births using the Orange County Master Birth File.

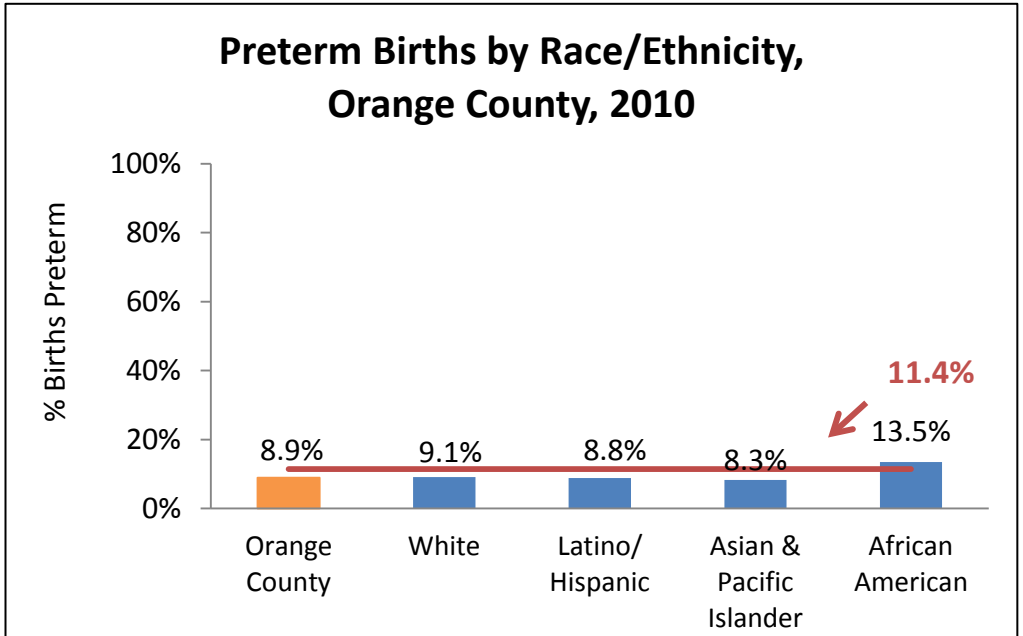
Importance of Indicator: Preterm births is a leading cause of infant mortality and long-term morbidity [10]. Adverse health outcomes related to preterm birth include cerebral palsy, developmental delay, and vision and hearing impairment [11]. Maternal risk factors of preterm births include chronic infections, hypertension, history of a prior preterm birth, substance abuse/use, low pregnancy weight gain, stress during pregnancy, maternal age, and short intervals between pregnancies [10, 11].

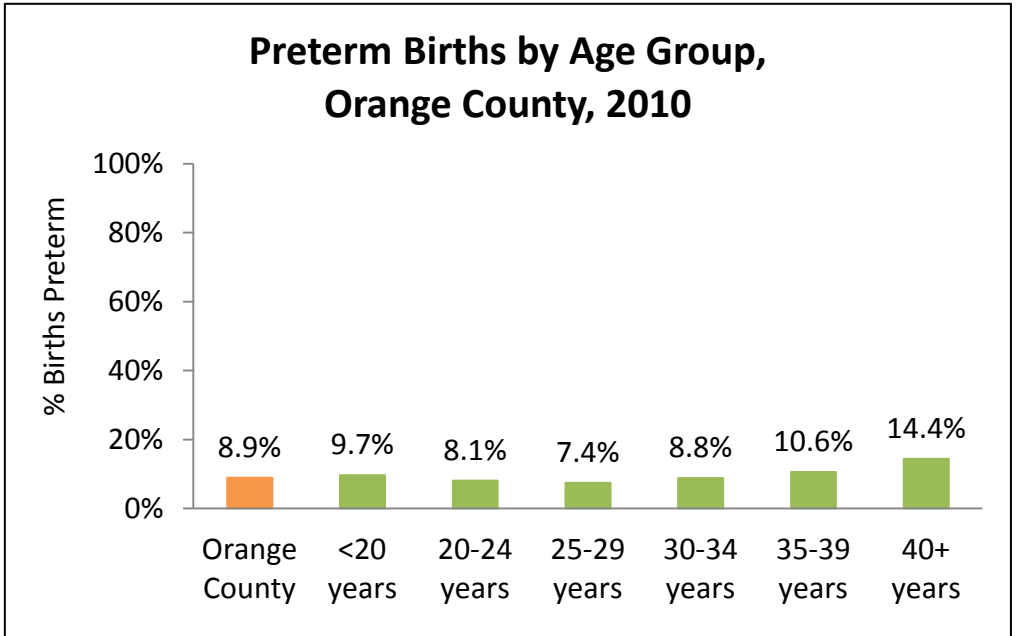
Healthy People 2020 Goal [LHI]: Reduce total preterm births from 12.7% of live births in 2007 to 11.4% of live births.

Indicates Healthy People 2020 Goal



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	9.5%	9.3%	9.3%	9.1%	9.2%	9.1%	9.7%	9.4%	9.4%	8.9%
CA	9.6%	9.6%	9.8%	9.9%	10.3%	10.3%	10.8%	10.5%	10.2%	9.9%
US	11.8%	12.0%	12.2%	12.4%	12.6%	12.7%	12.7%	12.3%	12.2%	12.0%



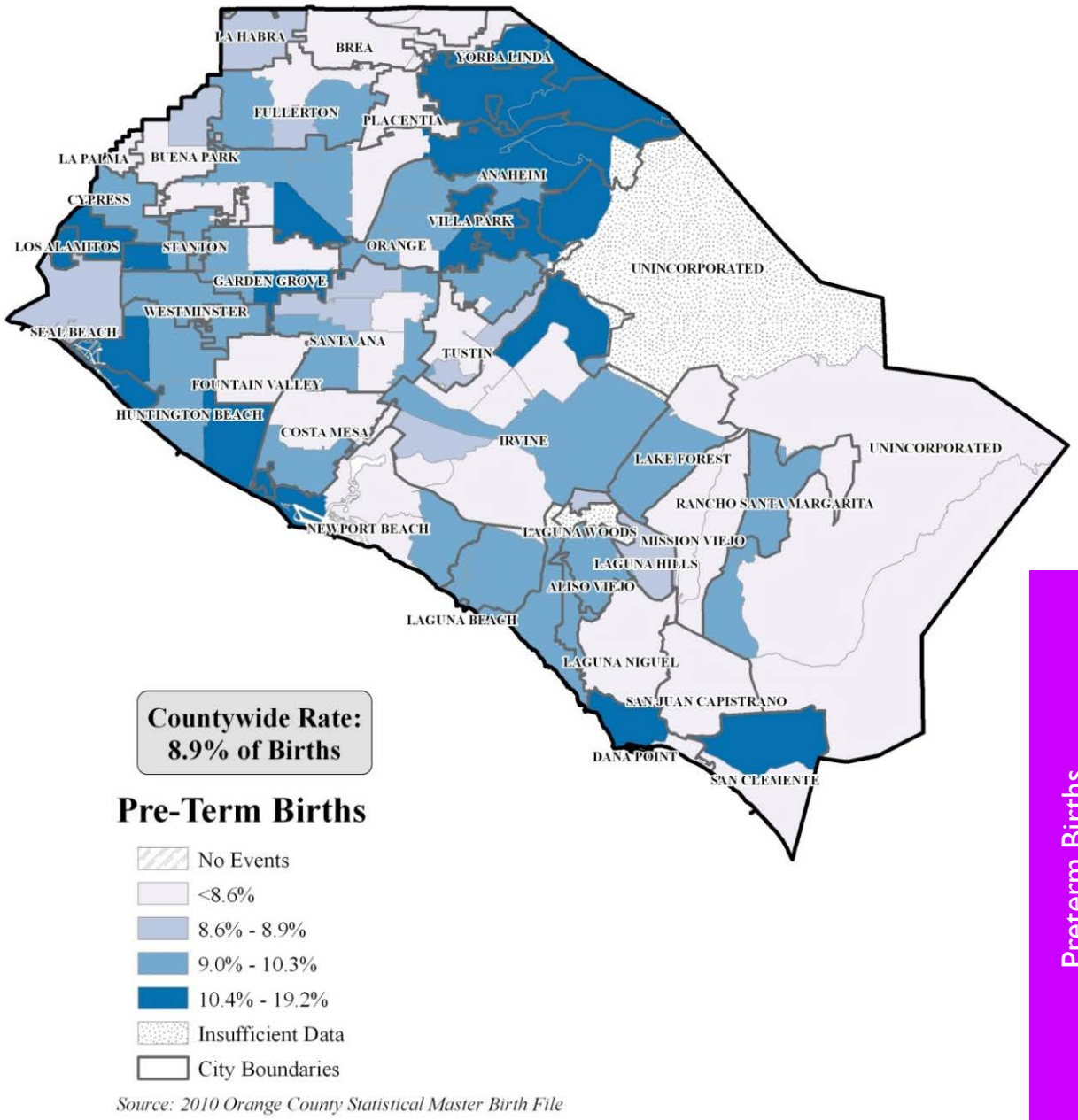


Source: OC Master Birth File; CDPH Vital Statistics Query System; National Vital Statistics Reports

City	% Births Preterm,, 2010
La Palma	6.7%*
Laguna Niguel	7.5%
San Juan Capistrano	7.5%*
Fountain Valley	7.6%
Brea	7.8%
Irvine	7.8%
Tustin	7.9%
Mission Viejo	7.9%
Buena Park	7.9%
Placentia	8.2%
Santa Ana	8.5%
La Habra	8.5%
Seal Beach	8.8%
Orange County	8.9%
Westminster	8.9%
Costa Mesa	8.9%
San Clemente	9.0%
Newport Beach	9.0%
Dana Point	9.0%*
Fullerton	9.0%
Laguna Hills	9.1%
Orange	9.3%
Anaheim	9.5%
Aliso Viejo	9.5%
Stanton	9.6%
Rancho Santa Margarita	9.6%
Laguna Beach	9.8%*
Lake Forest	9.8%
Los Alamitos	9.8%*
Garden Grove	9.8%
Huntington Beach	9.9%
California	9.9%
Cypress	10.3%
Yorba Linda	11.1%
United States	12.0%
Villa Park	19.2%*

**Estimate unstable*

Orange County Pre-Term Births (2010) (< 37 Weeks Gestation)



Source: 2010 Orange County Statistical Master Birth File

Infant Mortality

Impact: In 2010, there were **147 infant deaths** in Orange County, for a rate of 3.8 per 1,000 of the 38,237 births in that year.

Description of Indicator: This indicator measures the rate of deaths per 1,000 population of infants under one year of age using the Orange County Master Death File and Master Birth File. The top three causes of infant mortality in Orange County are SIDS and other unspecified causes (47 cases), congenital anomalies (41 cases), and maternal complications during pregnancies (19 cases).

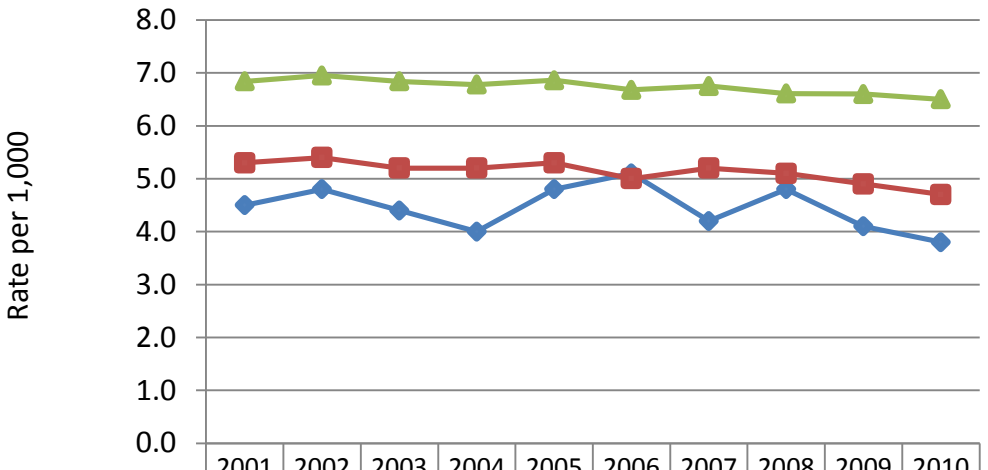
Importance of Indicator: Infant mortality is associated with maternal health and medical conditions, low birth weight, preterm births, congenital anomalies, respiratory conditions, and SIDS [12, 13]. In the last two decades, infant deaths attributable to accidental suffocation and strangulation in bed, a subset of sudden, unexpected infants deaths, have quadrupled nationally, indicating the need for increased preventive efforts focused on educating caregivers about safer sleep environments [14].

Healthy People 2020 Goal [LHI]: Reduce the rate of all infant deaths (within 1 year) from 6.7 infant deaths per 1,000 live births in 2006 to 6.0 infant deaths per 1,000 live births.

Technical Notes: *Sub-county geographic detail is not available.*

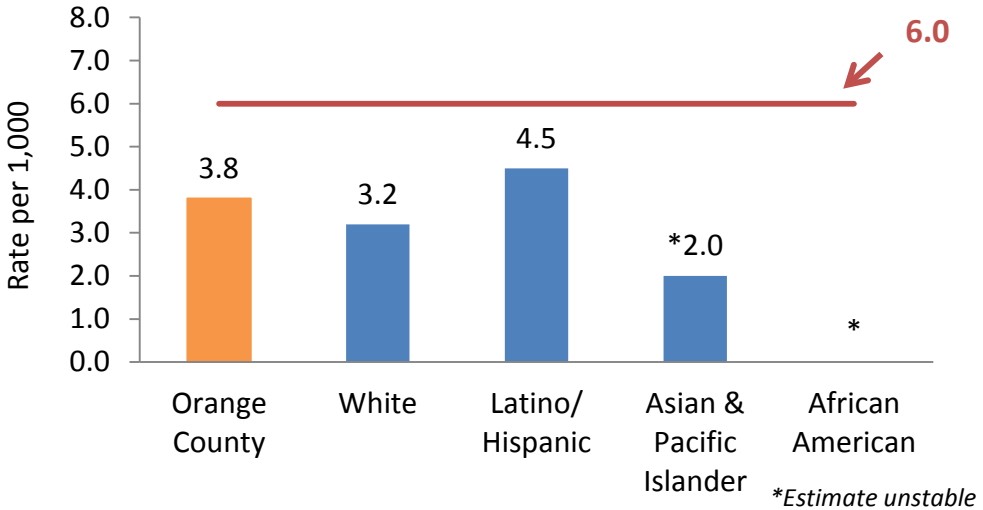
Indicates Healthy People 2020 Goal

Infant Mortality, 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	4.5	4.8	4.4	4.0	4.8	5.1	4.2	4.8	4.1	3.8
CA	5.3	5.4	5.2	5.2	5.3	5.0	5.2	5.1	4.9	4.7
US	6.8	7.0	6.8	6.8	6.9	6.7	6.8	6.6	6.6	6.5

Infant Mortality by Race/Ethnicity, Orange County, 2010



**Estimate unstable*

Comparison by Age Group not indicated

Source: OC Master Death and Birth File; CDPH Vital Statistics Query System, CDC WONDER

Exclusive Breastfeeding

Impact: It is estimated that **36.2% of infants were exclusively breastfed** for the first three months in Orange County in 2010.

Description of Indicator: This indicator measures the proportion of mothers exclusive breastfeeding (and not feeding solids or other liquids including water, juice, and formula) their infants at the age of three months as a percentage of a sample of mothers of healthy term infants as reported through the California Maternal and Infant Health Assessment (MIHA) Survey.

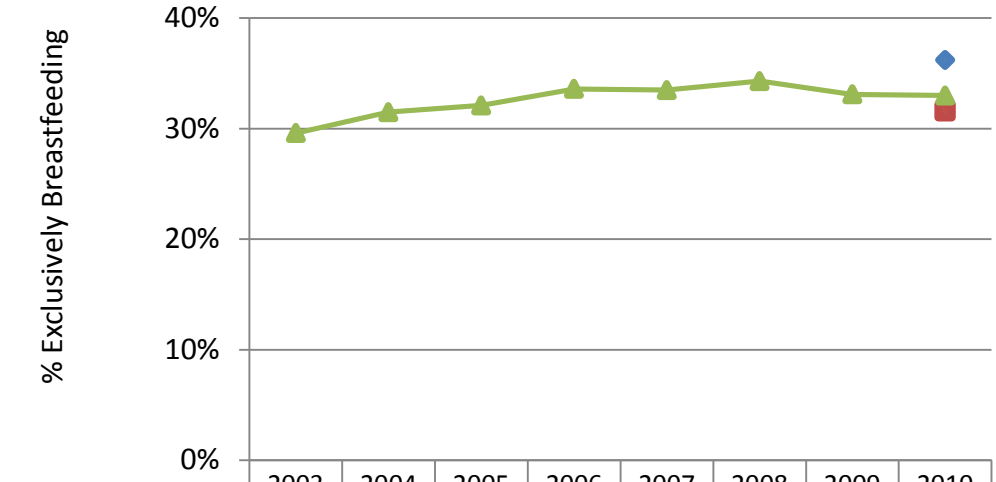
Importance of Indicator: Human breast milk is the optimal source of nutrition and provides many benefits for healthy growth and development [15]. Breastfeeding helps protect against SIDS, respiratory infections, childhood obesity, and other conditions [16]. Mothers benefit from reduced risk of breast and other cancers [17].

Healthy People 2020 Goal: Increase proportion of infants breastfed exclusively through three months from 33.6% in 2006 to 46.2%.

Technical Notes: *MIHA Survey was not implemented in California until 2010. Sub-county geographic detail is not available.*

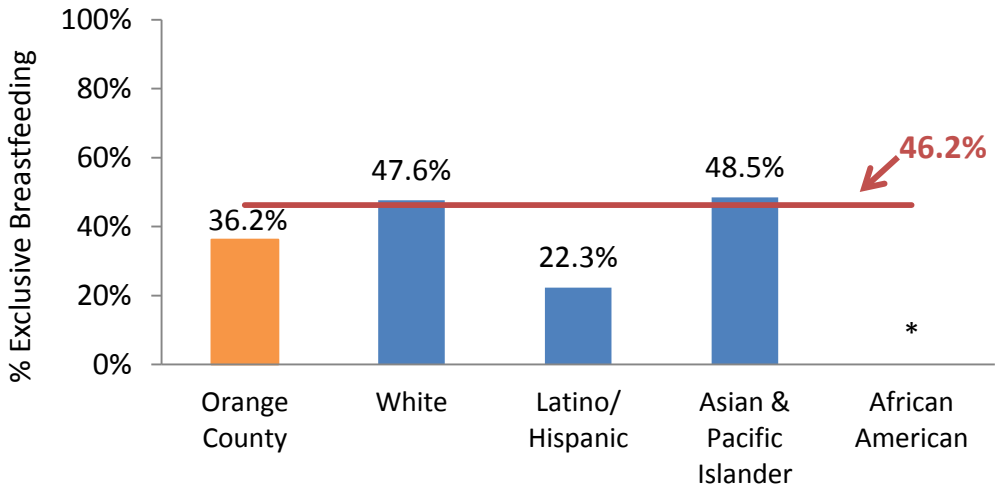
Indicates Healthy People 2020 Goal

Exclusive Breastfeeding, 2003-2010



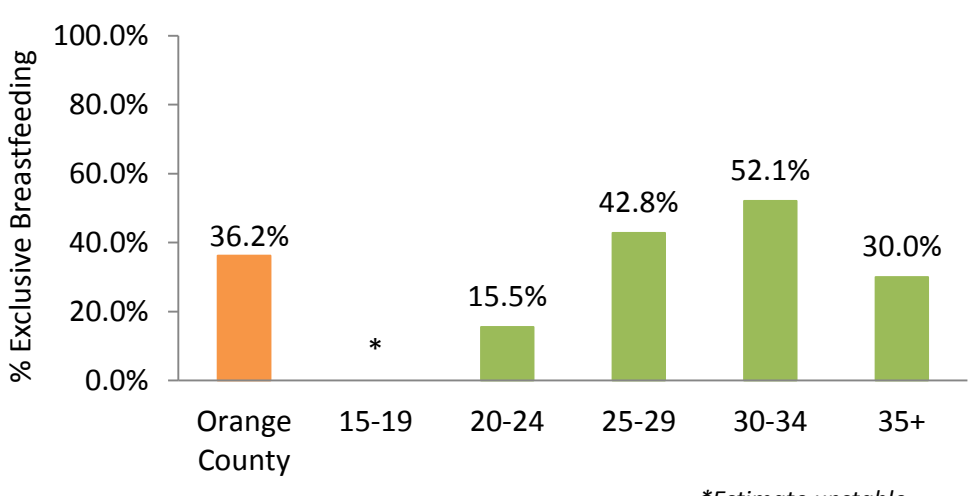
	2003	2004	2005	2006	2007	2008	2009	2010
Orange County								36.2%
CA								31.6%
US	29.6%	31.5%	32.1%	33.6%	33.5%	34.3%	33.1%	33.0%

Exclusive Breastfeeding by Race/Ethnicity, Orange County, 2010



**Estimate unstable*

Exclusive Breastfeeding by Age Group, Orange County, 2010



**Estimate unstable*

Source: CA Maternal and Infant Health Assessment (MIHA) Survey; National Immunization Survey

Postpartum Depression

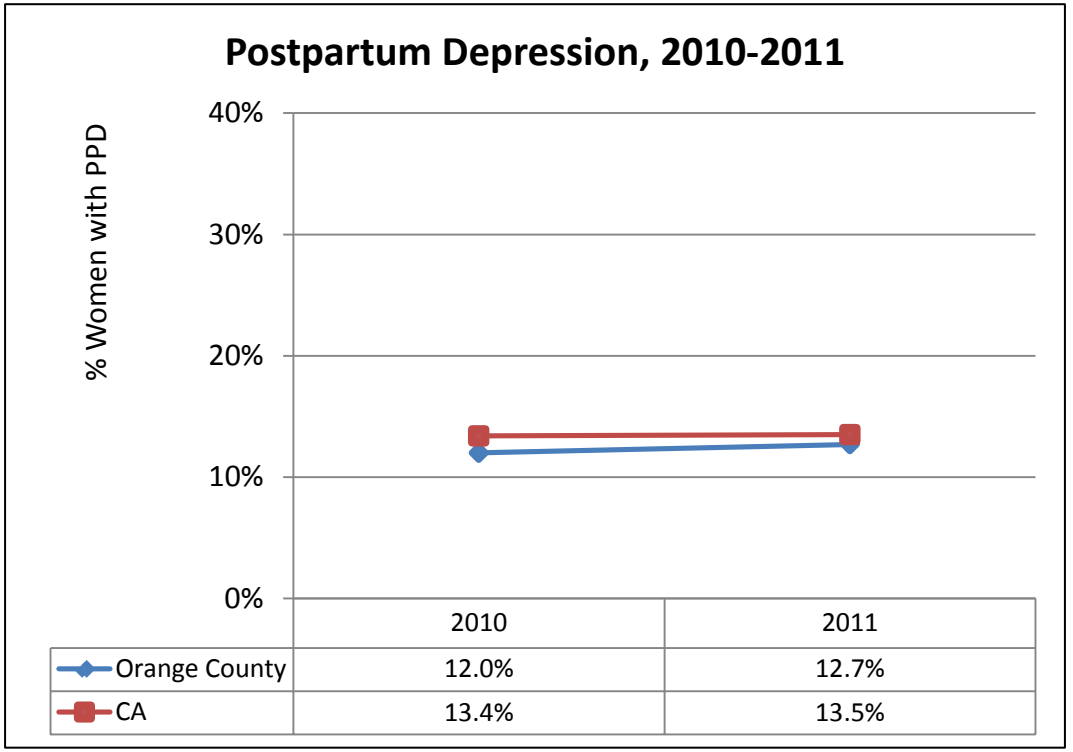
Impact: It is estimated that **12.7% of women who gave birth experienced postpartum depression (PPD)** in Orange County in 2011.

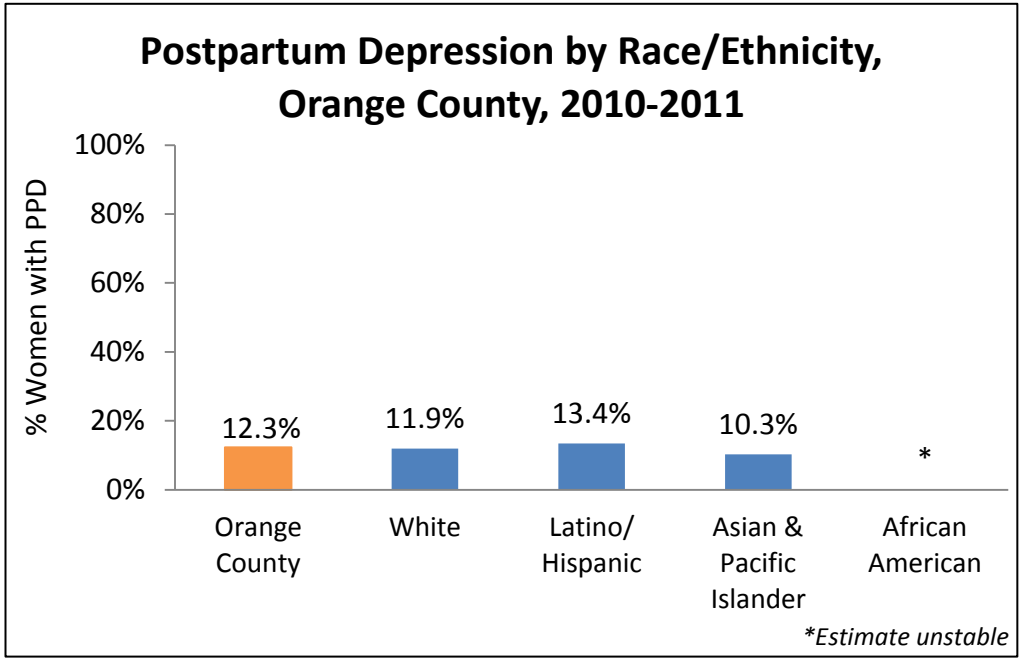
Description of Indicator: This indicator measures the proportion of women who gave birth in the last year who experienced postpartum depressive symptoms as a percentage of a sample of mothers of healthy term infants as reported through the California Maternal and Infant Health Assessment (MIHA) Survey.

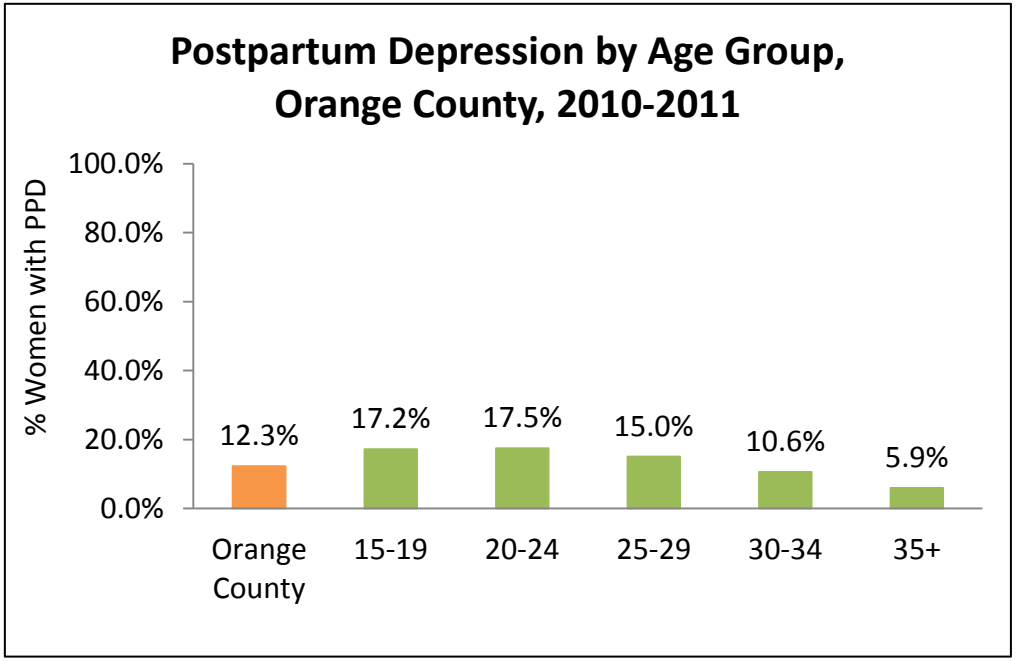
Importance of Indicator: It is estimated that 10-15% of U.S. women and 13.4% of women in California experience PPD, which is characterized by symptoms of depression within the first year after giving birth [18, 19]. Low income women, younger mothers and those experiencing partner-related stress or physical abuse might be more likely to report PPD [18].

Healthy People 2020 Goal: No comparable goal.

Technical Notes: *MIHA Survey was not implemented in California until in 2010; national data is not available. 2010-2011 local data for race/ethnicity and age group are collapsed to increase stability of data. Sub-county geographic detail is not available.*







Source: California Maternal and Infant Health Assessment (MIHA) Survey

Child Abuse

Impact: In 2011, there were **6,836 substantiated cases of child abuse** in Orange County, for a rate of 9.5 per 1,000.

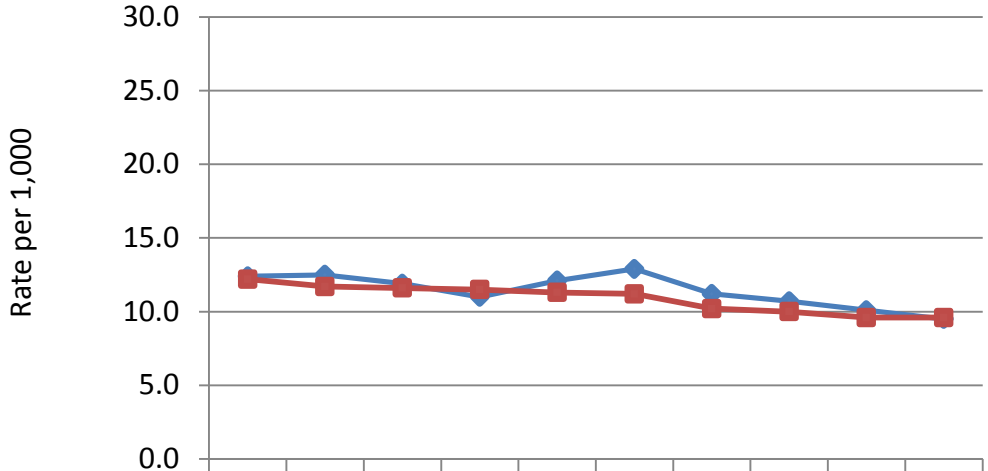
Description of Indicator: This indicator measures the rate of substantiated child abuse allegations per 1,000 children under 18 years of age, between October 1 and September 30 of the following year, using the Child Welfare Dynamic Report System at UC Berkeley in collaboration with California Department of Social Services.

Importance of Indicator: Children who are abused or neglected, including those who witness domestic violence, often exhibit emotional, cognitive, and behavioral problems, such as anxiety, depression, suicidal behavior, difficulty in school, use of alcohol and other drugs, and early sexual activity [20]. Abuse, particularly experienced when children are young, causes stress that can disrupt early brain and physical development, placing mistreated young children at higher risk for health problems as adults [21].

Healthy People 2020 Goal: Not comparable to data shown.

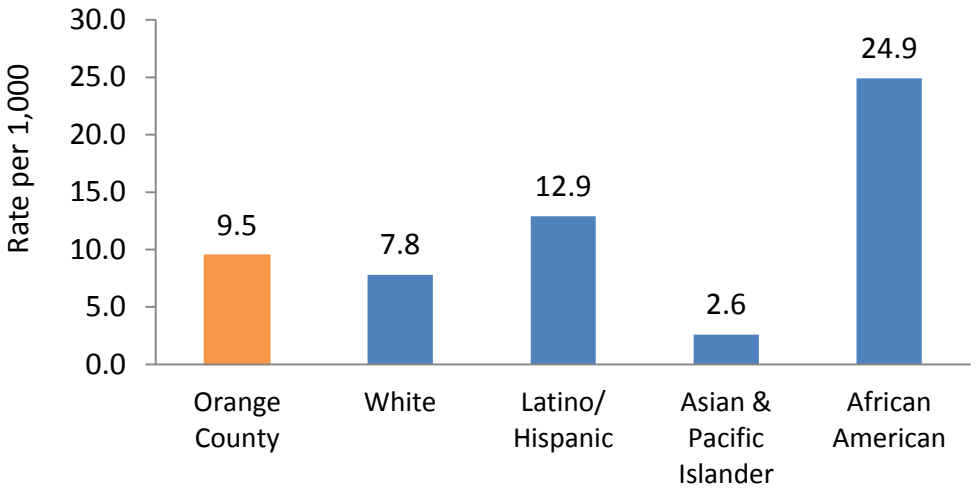
Technical Note: *Sub-county geographic detail is not available.*

Substantiated Child Abuse, 2002-2011

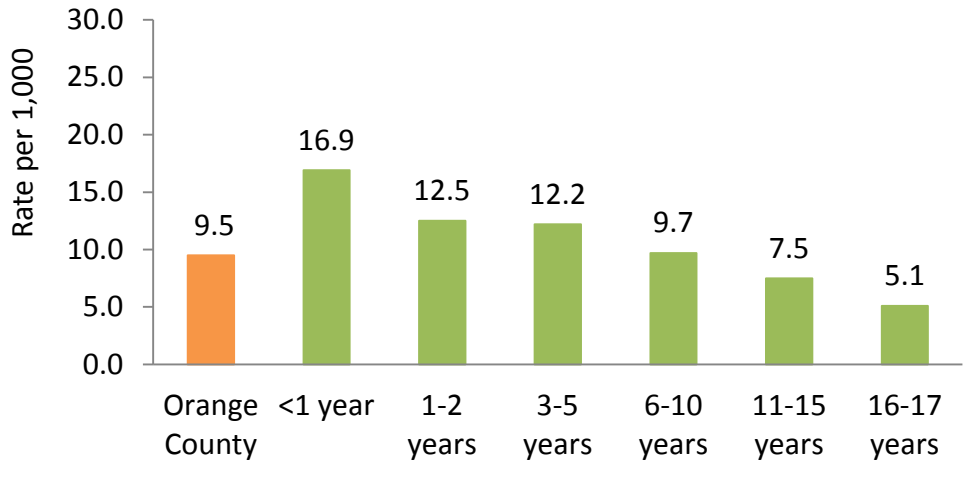


	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Orange County	12.4	12.5	11.9	11.0	12.1	12.9	11.2	10.7	10.1	9.5
CA	12.2	11.7	11.6	11.5	11.3	11.2	10.2	10.0	9.6	9.6

Substantiated Child Abuse by Race/Ethnicity, Orange County, 2011



Substantiated Child Abuse by Age Group, Orange County, 2011



Source: Child Welfare Dynamic Report System; California Department of Social Services

Childhood Immunizations

Impact: It is estimated that **75.7% of two year olds and 89.3% of kindergarteners** were up to date with their immunizations in Orange County in 2012.

Description of Indicator: This indicator measures the proportion of children who are considered to be up to date for DTaP, Polio, MMR, Hepatitis B, and Varicella vaccines recommended by their 2nd birthday as reported through the Kindergarten Retrospective Survey and at kindergarten entry as reported through the Kindergarten Assessment Results. Both surveys are conducted through the California Department of Health Services, Immunization Branch.

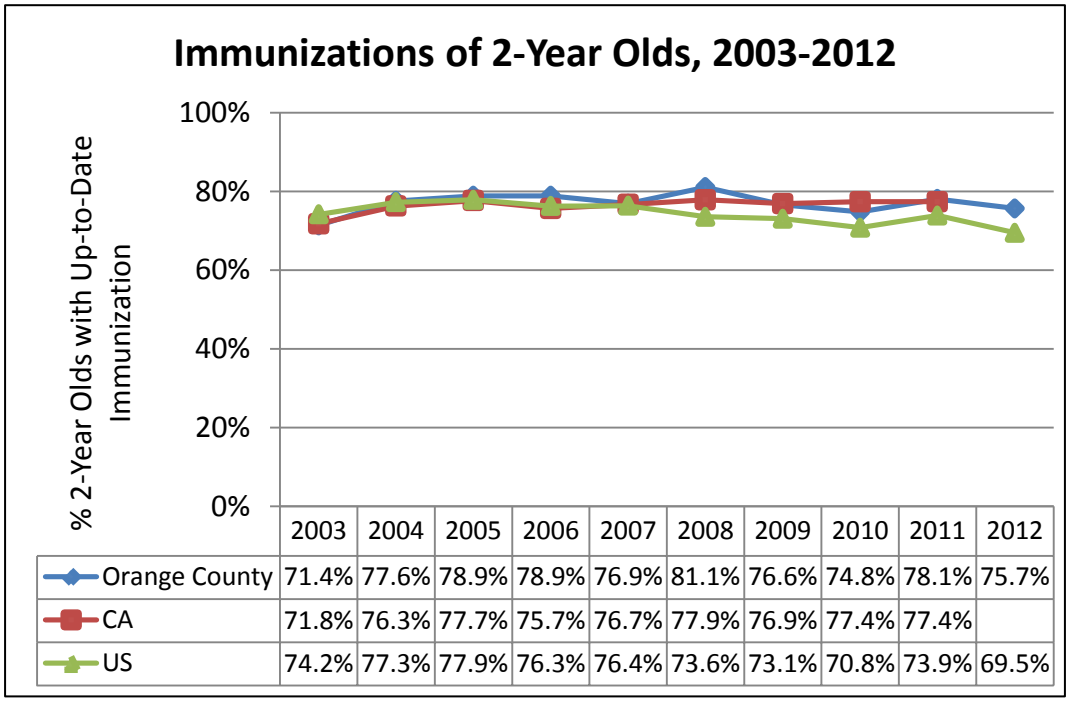
Importance of Indicator: Childhood immunizations have largely reduced or nearly eliminated once-common diseases such as polio, diphtheria, measles, and mumps [22]. Over the past decades, there has been reduced vaccine coverage and herd immunity due in part to increased parental hesitancy about vaccinations [23].

Healthy People 2020 Goals:

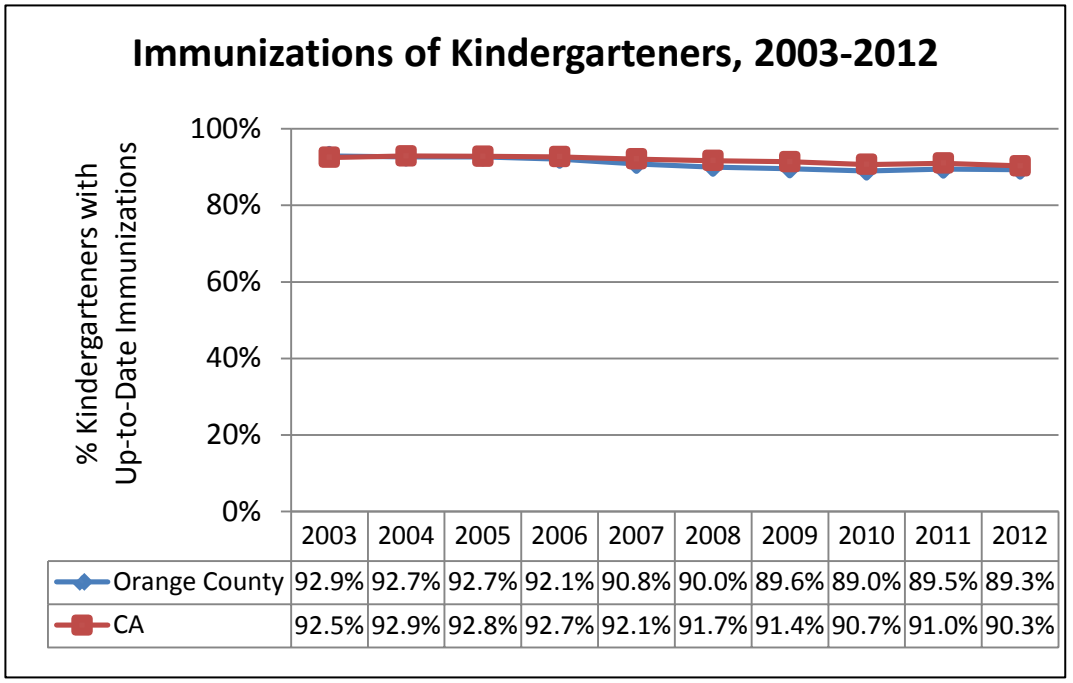
[LHI] Increase the percentage of children aged 19-35 months who receive the recommended doses of DTaP, Polio, MMR, Hepatitis B, Varicella, and Pneumococcal Conjugate Vaccine (PCV) from 44.3% in 2009 to 80.0% (definition is not comparable to data shown).

Maintain a vaccination level of at least 95% among children in kindergarten.

Technical Notes: *Data at 2nd birthday are based on retrospective reviews of randomly selected kindergarten immunization records; therefore sub-county geographic detail is not shown. Data at kindergarten entry include all public and private schools in Orange County. After 2010, California data is no longer being collected for percent of up-to-date immunized children at their 2nd birthday.*



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Orange County	71.4%	77.6%	78.9%	78.9%	76.9%	81.1%	76.6%	74.8%	78.1%	75.7%
CA	71.8%	76.3%	77.7%	75.7%	76.7%	77.9%	76.9%	77.4%	77.4%	
US	74.2%	77.3%	77.9%	76.3%	76.4%	73.6%	73.1%	70.8%	73.9%	69.5%

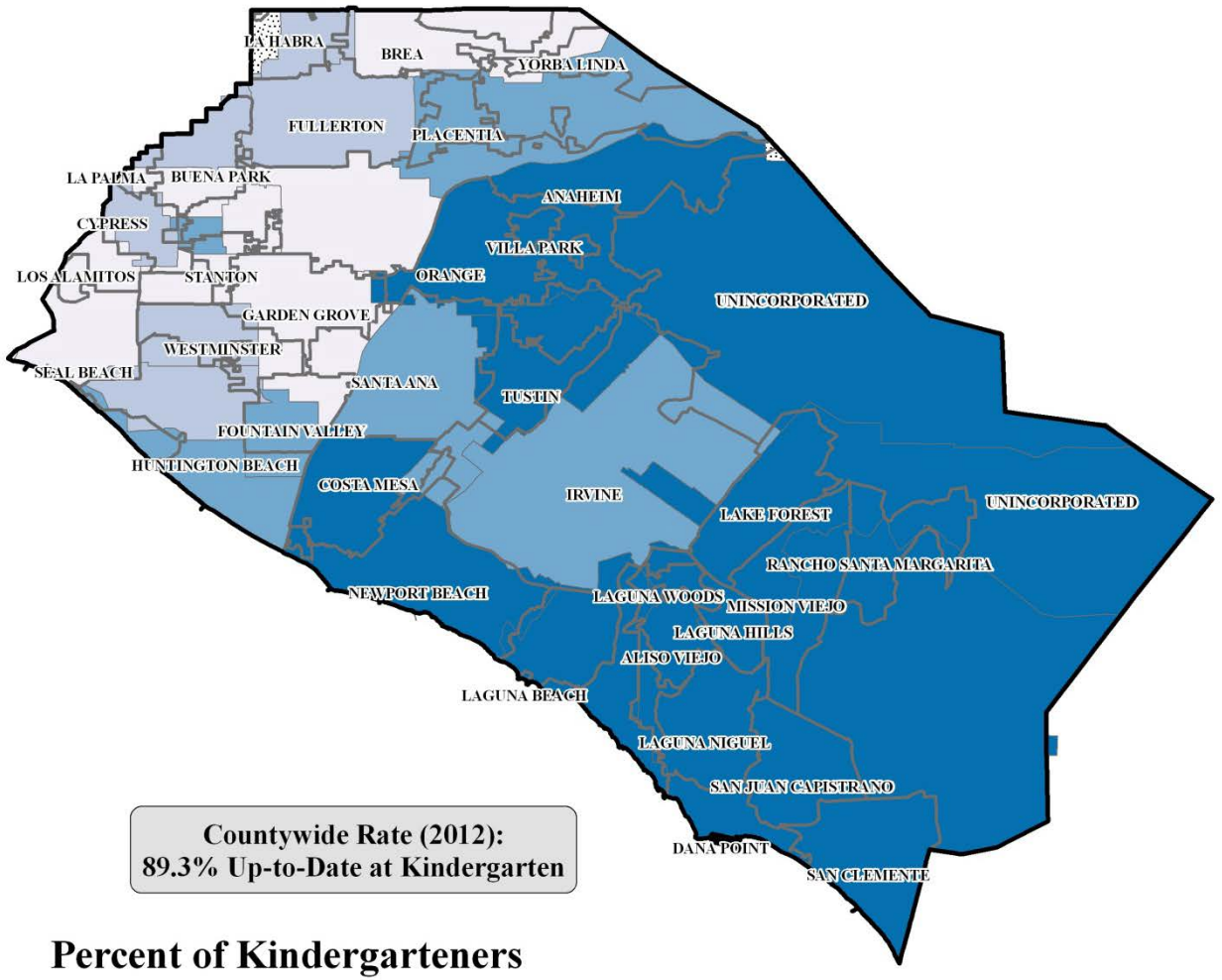


	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Orange County	92.9%	92.7%	92.7%	92.1%	90.8%	90.0%	89.6%	89.0%	89.5%	89.3%
CA	92.5%	92.9%	92.8%	92.7%	92.1%	91.7%	91.4%	90.7%	91.0%	90.3%

Source: Kindergarten Retrospective Survey; Kindergarten Assessment Results; CDC National Immunization Survey

School District	% Kindergarteners with Up-to-Date Immunizations, 2012
Anaheim City	97.5%
Magnolia Elementary	96.5%
Garden Grove Unified	96.0%
Brea-Olinda Unified	95.1%
Centralia Elementary	95.1%
Los Alamitos Unified	94.7%
Ocean View	94.4%
Fullerton Elementary	94.2%
Westminster Elementary	93.8%
Buena Park Elementary	93.4%
La Habra City Elementary	93.0%
Cypress Elementary	92.8%
Santa Ana Unified	91.0%
Fountain Valley Elementary	90.6%
Placentia-Yorba Linda Unified	90.3%
California	90.3%
Savanna Elementary	89.5%
Irvine Unified	89.4%
Orange County	89.3%
Huntington Beach City Elementary	87.5%
Orange Unified	87.1%
Tustin Unified	86.8%
Saddleback Valley Unified	85.3%
Newport-Mesa Unified	83.2%
Laguna Beach Unified	77.9%
Capistrano Unified	75.4%

Orange County Immunization at Kindergarten (2012)
Percent of Kindergarteners with Up-to-Date Immunization



Countywide Rate (2012):
89.3% Up-to-Date at Kindergarten

Percent of Kindergarteners with Up to Date Immunization(%)

- 75.4% - 87.1%
- 87.2% - 91%
- 91.1% - 94.4%
- 94.5% - 97.5%
- Data missing or unstable
- OC City Boundaries

Source: 2012 Kindergarten Assessment Results, California Department of Health Services, Immunization Branch

Births to Teens

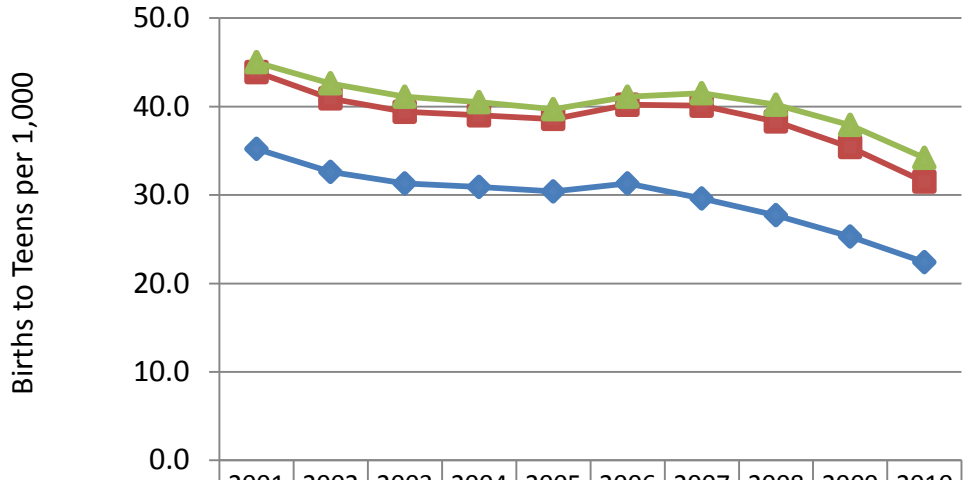
Impact: Impact: In 2010, there were **2,479 births to teens** 15-19 years of age in Orange County, which accounted for 6% of the 38,237 births in that year.

Description of Indicator: This indicator measures the rate of births per 1,000 females ages 15-19 using the Orange County Master Birth File.

Importance of Indicator: Infants born to teen mothers are at a higher risk of experiencing preterm birth, low birth weight, and death in infancy [24]. Children born to teens are more likely to die younger, drop out of high school, enter foster care, use public assistance, and have children as teens themselves [25]. Additionally, teen mothers are more likely to depend on public assistance, live in poverty, and drop out of school [26].

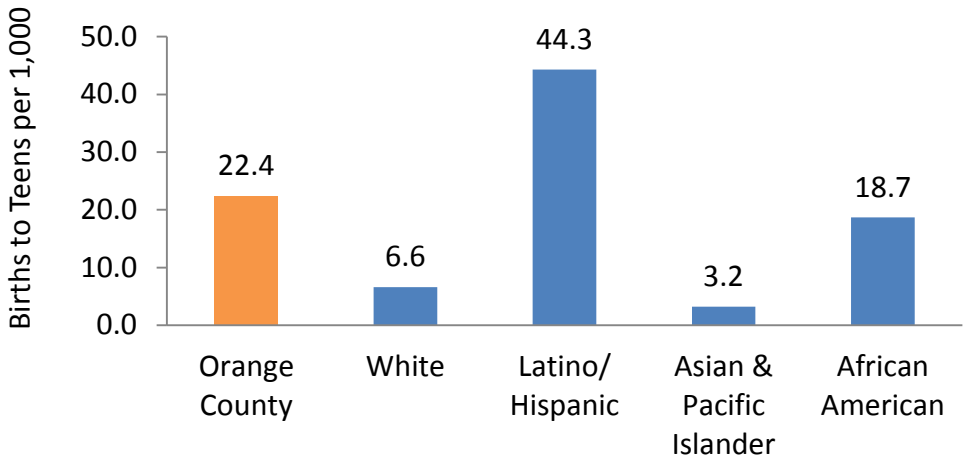
Healthy People 2020 Goal: No comparable goal.

Births to Teens, 2001-2010

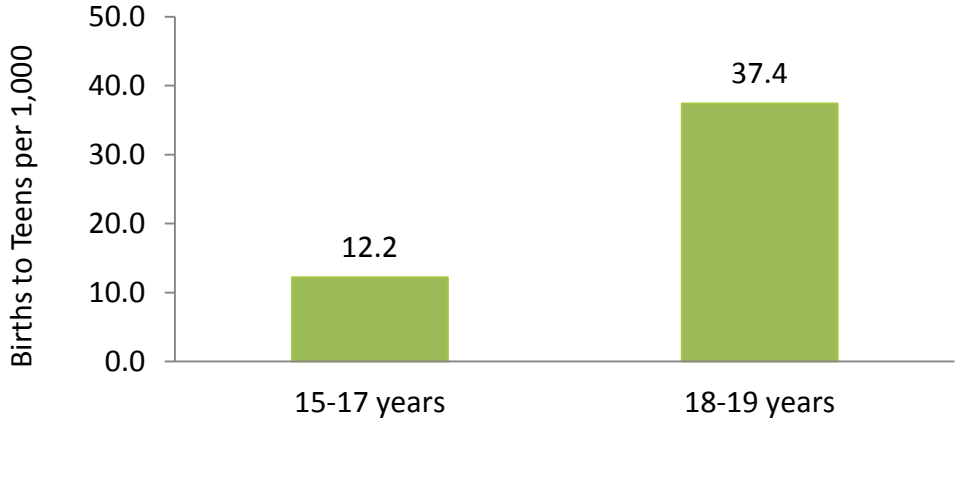


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	35.2	32.6	31.3	30.9	30.4	31.3	29.6	27.7	25.3	22.4
CA	43.9	40.9	39.4	39.0	38.6	40.2	40.1	38.3	35.4	31.5
US	45.0	42.6	41.1	40.5	39.7	41.1	41.5	40.2	37.9	34.2

Births to Teens by Race/Ethnicity, Orange County, 2010



Births to Teens by Age Group, Orange County, 2010

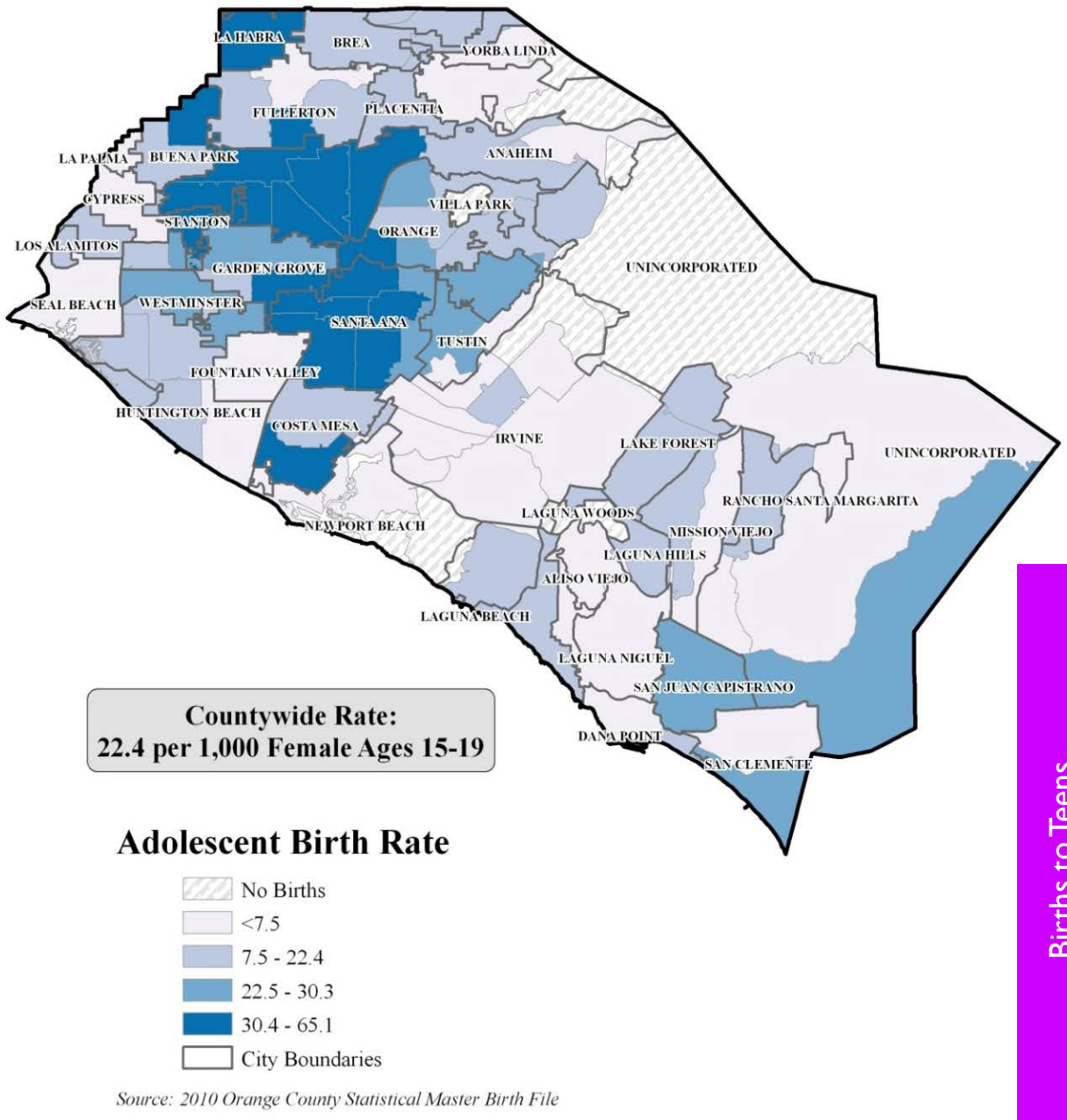


Source: OC Master Birth File, CDPH Vital Statistics Query System, CDC Vital Statistics

City	Births to Teens per 1,000, 2010
Newport Beach	1.9
Irvine	2.4*
Yorba Linda	3.9*
Aliso Viejo	4.7*
Cypress	6.2*
Fountain Valley	7.0*
Laguna Niguel	7.4*
Mission Viejo	7.5
Brea	9.0*
Rancho Santa Margarita	9.5*
Huntington Beach	11.9
Lake Forest	12.5
Laguna Hills	13.6*
Los Alamitos	16.2*
Fullerton	17.1
San Clemente	18.6
San Juan Capistrano	20.3
Placentia	21.3
Buena Park	22.0
Orange County	22.4
Westminster	22.9
Orange	23.5
Tustin	24.9
Costa Mesa	25.6
Garden Grove	27.9
California	31.5
Stanton	32.7
La Habra	32.9
United States	34.2
Anaheim	41.2
Santa Ana	53.5
Dana Point	Estimate unstable
La Palma	Estimate unstable
Laguna Beach	Estimate unstable
Laguna Woods	Estimate unstable
Seal Beach	Estimate unstable
Villa Park	Estimate unstable

**Estimate unstable*

Orange County Adolescent Birth Rate (2010)
Rate per 1,000 Females Ages 15-19



Source: 2010 Orange County Statistical Master Birth File

References

Prenatal Care

1. U.S. Public Health Services (Expert Panel on the Content of Prenatal Care). Caring for our future: The content of prenatal care. Washington, DC: U.S. Department of Health and Human Services, 1989.
2. Kirkham C, et al. Evidence-based prenatal care: Part I. General prenatal care and counseling issues. Am Fam Physician 2005;17(7):1307-16.
3. Kirkham C, et al. Evidence-based prenatal care: Part II. Third-trimester care and prevention of infectious diseases. Am Fam Physician 2005;71(8):1555-60.

Gestational Diabetes

4. Mothers with a Higher Pre-Pregnancy Body Mass Index are at Increased Risk for Gestational Diabetes Mellitus (2012) Orange County Health Care Agency, QM Research and Planning, Santa Ana, California.
5. Brody SC, et al. Screening for Gestational Diabetes: A Summary of the Evidence for the U.S. Preventive Services Task Force. Obstetrics & Gynecology 2003;101(2):380-392.
6. Ramos R, et al. Complications of Pregnancy and Childbirth in Orange County. Orange County Health Care Agency, Santa Ana, CA. 2011.
7. U.S. Public Health Services (Expert Panel on the Content of Prenatal Care). Caring for our future: The content of prenatal care. Washington, DC: U.S. Department of Health and Human Services, 1989.

Low Birth Weight

8. Petrou S, et al. The long-term costs of preterm birth and low birth weight: Results of a systematic review. Child Care Health and Development 2001;27(2):97-115.
9. Low and Very Low Birth Weight, Child Trends Data Bank. Available from http://www.childrendsdatabank.org.

Preterm Births

10. Ashton D, et al. Surgeon General's Conference on the Prevention of Preterm Birth. Am College of Obstet and Gynecol 2009;113(4):925-930.
11. Institute of Medicine (US) Committee on Understanding Premature Birth and Assuring Healthy Outcomes; Behrman RE, Butler AS, editors. Preterm Birth: Causes, Consequences, and Prevention. Washington (DC): National Academies Press (US); 2007. The National Academies

Infant Mortality

12. MacDorman MF and Matthews TJ. Recent Trends in Infant Mortality in the United States. CDC, NCHS data brief, no 9. Hyattsville, MD: National Center for Health Statistics. 2008.
13. Kids Count Data Book, 2012. Annie E. Casey Foundation, Baltimore, MD, 2012.
14. Shapiro-Mendoza CK, et al. US infant mortality trends attributable to accidental suffocation and strangulation in bed from 1984 through 2004: are rates increasing? Pediatrics 2009;123:533-539.

References

Exclusive Breastfeeding

15. Gartner LM, et al. Breastfeeding and the use of human milk. Pediatrics 2005;115:496-506.
16. Jackson KM and Nazar AM. Breastfeeding, the immune response, and long-term health. JAOA 2006;106(4):203-207.
17. Ip S, et al. Breastfeeding and maternal and infant health outcomes in developed countries. Evidence Report/Technology Assessment No 153. AHRQ Publication No. 07-E007. Rockville, MD: Agency for Healthcare Research and Quality, 2007.

Postpartum Depression

18. Centers for Disease Control and Prevention. Prevalence of self-reported postpartum depressive symptoms – 17 states, 2004-2005. MMWR Morb Mortal Wkly Rep. 2008;57(14):361-366. Available at: http://www.cdc.gov/mmwR/preview/mmwrhtml/mm5714a1.htm.
19. California Department of Public Health. MIHA Snapshot, Orange County 2010.

Child Abuse

20. Child Welfare Information Gateway. Long-term consequences of child abuse and neglect. Washington, D.C.: U.S. Department of Health and Human Services, Children's Bureau. 2013.
21. Middlebrooks JS and Audage NC. The effects of childhood stress on health across the lifespan. Atlanta, GA: Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. 2008.

Childhood Immunizations

22. Centers for Disease Control and Prevention. Impact of vaccines universally recommended for children—United States, 1990–1998. MMWR Morb Mortal Wkly Rep. 1999;48:243–8.
23. Mills E, et al. Systematic review of qualitative studies exploring parental beliefs and attitudes toward childhood vaccination identifies common barriers to vaccination. J Clin Epidemiol 2005;58(11):1081-88.

Births to Teens

24. Chen XK, et al. Teenage pregnancy and adverse birth outcomes: a large population based retrospective cohort study. Int J Epidemiol 2007;36(2):368-373.
25. Jutte DP, et al. The ripples of adolescent motherhood: Social, educational, and medical outcomes for children of teen and prior teen mothers. Academic Pediatrics 2010;10(5):293-301.
26. Haveman R, et al. Childhood poverty and adolescent schooling and fertility outcomes: Reduced-form and structural estimates. In G.J. Duncan and J. Brooks-Gunn, eds., Consequences of growing up poor. New York: Russell Sage Foundation, 1997.

This page intentionally left blank.

Chronic Diseases

Diabetes

Impact: In 2011-2012, **7.4% of adults** (7.9% of males and 6.9% of females) in Orange County reported being diagnosed with diabetes.

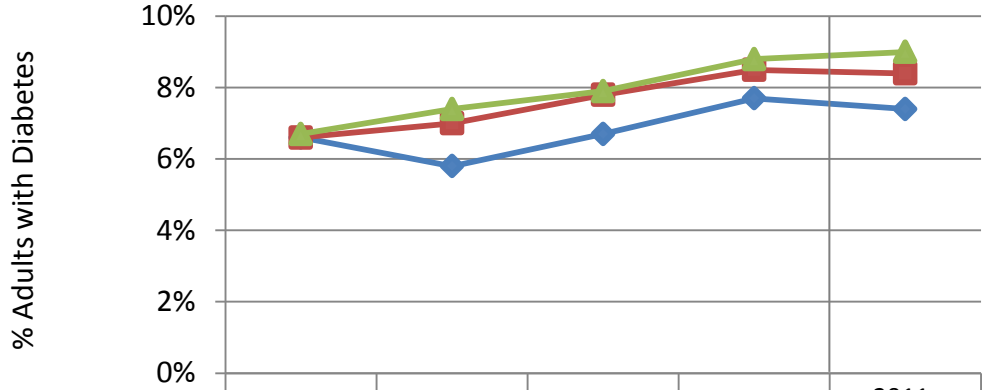
Description of Indicator: This indicator measures the proportion of adults who report ever being diagnosed with diabetes as reported through the California Health Interview Survey (CHIS).

Importance of Indicator: Diabetes is a major cause of heart disease and stroke [1], two of the top three leading causes of death in Orange County, and is itself a leading underlying cause of mortality [1]. In Orange County, diabetes is the 8th leading cause of death overall, the 5th leading cause of death among Latinos, and the 6th leading cause of death among Asians and Pacific Islanders. New diagnosed cases of diabetes have tripled since 1990 in the United States [1].

Healthy People 2020 Goal: No comparable goal.

Technical Note: *In 2011, CHIS began continuous data collection with two-year reporting cycles. Orange County and California estimates are for 2011-12 while United States estimates are reported from the National Health Interview Survey for 2011 only. Data after 2009 are not directly comparable to previous years due to changes in methodology. Sub-county geographic detail is not available.*

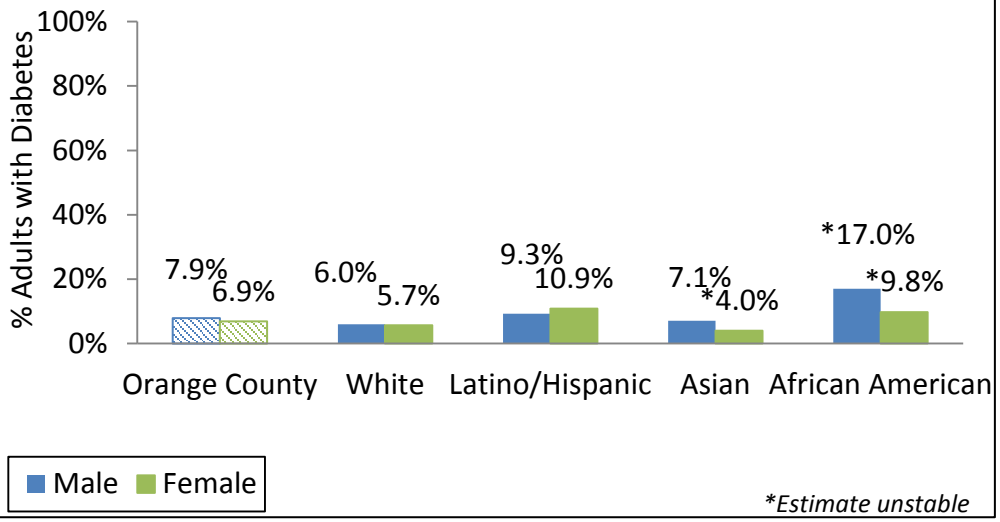
Diabetes Prevalence, 2003 - 2011-12*



	2003	2005	2007	2009	2011-12*
Orange County	6.6%	5.8%	6.7%	7.7%	7.4%
CA	6.6%	7.0%	7.8%	8.5%	8.4%
US	6.7%	7.4%	7.9%	8.8%	9.0%

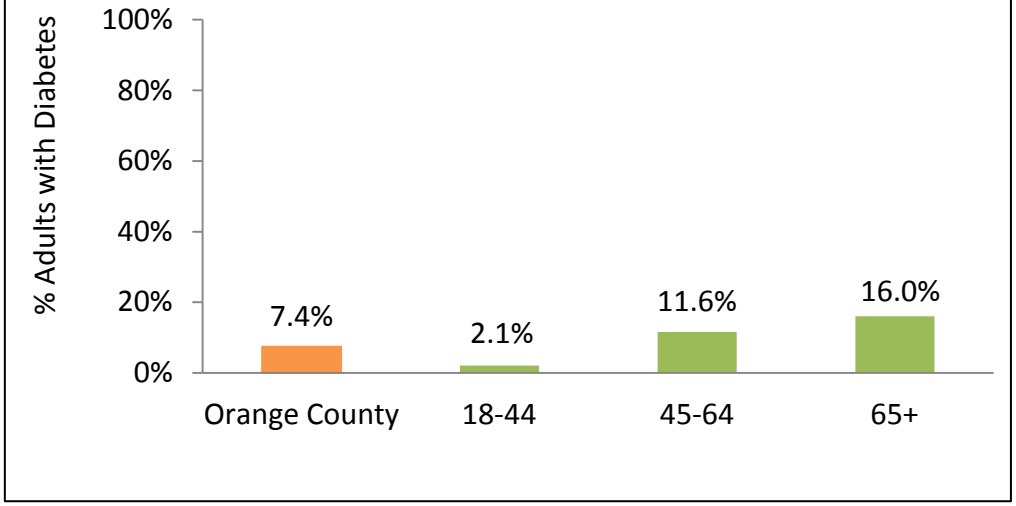
** Orange County and California estimates are for 2011-12 while United States estimates are for 2011 only. Data prior to 2011 not comparable.*

Diabetes by Race/Ethnicity and Gender, Orange County, 2011-12



**Estimate unstable*

Diabetes by Age Group, Orange County, 2011-12



Sources: California Health Interview Survey; National Health Interview Survey

Hypertension (High Blood Pressure)

Impact: In 2011-2012, **25.4% of adults** (26.2% of males and24.6% of females) in Orange County reported being diagnosed with hypertension.

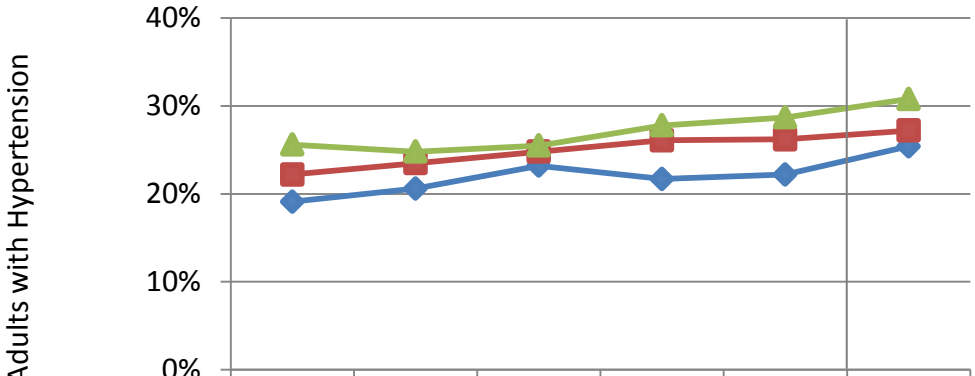
Description of Indicator: This indicator measures the proportion of adults who report ever being diagnosed with hypertension as reported through the California Health Interview Survey.

Importance of Indicator: Hypertension is a major risk factor for heart disease and stroke [2]. Heart disease and stroke are leading underlying causes of death in the United States [3], California [4], and Orange County, causing over 5,700 countywide deaths annually and accounting for over 33% of mortality [5].

Healthy People 2020 Goal: Not comparable with data shown.

Technical Note: *In 2011, CHIS began continuous data collection with two-year reporting cycles. Orange County and California estimates are for 2011-12 while United States estimates are reported from the Behavioral Risk Factor Surveillance System for 2011 only. Data after 2009 are not directly comparable to previous years due to changes in methodology. Sub-county geographic detail is not available.*

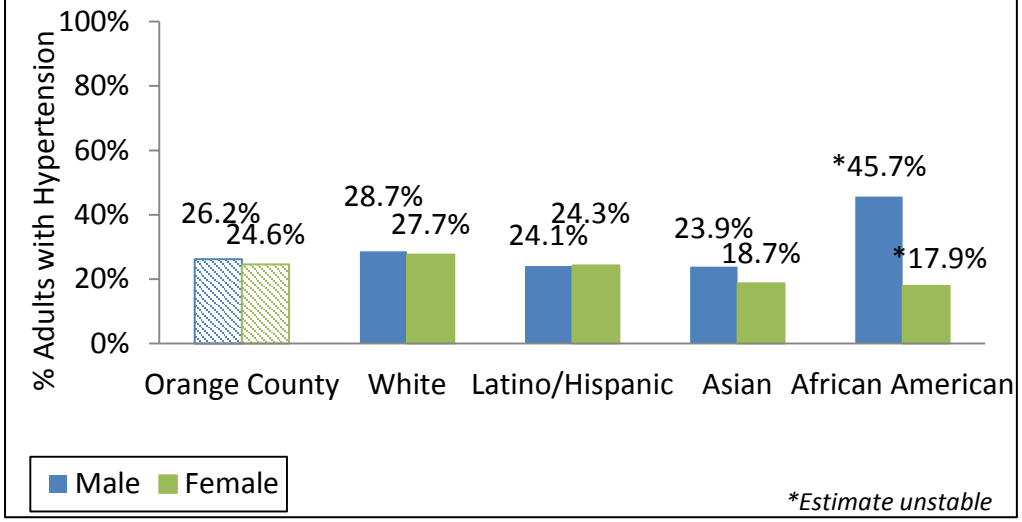
Hypertension Prevalence, 2001 – 2011-12*



	2001	2003	2005	2007	2009	2011-12*
Orange County	19.1%	20.6%	23.2%	21.7%	22.2%	25.4%
CA	22.2%	23.5%	24.8%	26.1%	26.2%	27.2%
US	25.6%	24.8%	25.5%	27.8%	28.7%	30.8%

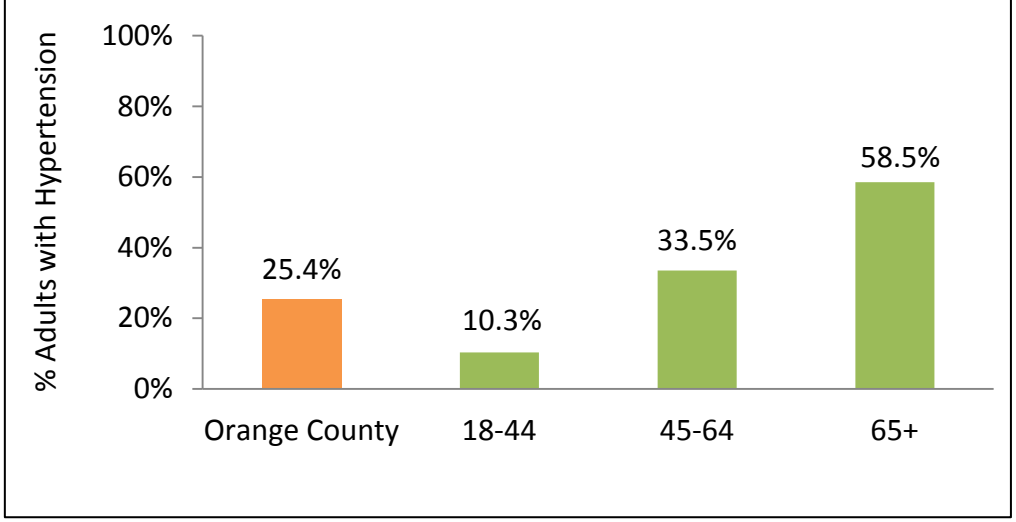
** Orange County and California estimates are for 2011-12 while United States estimates are for 2011 only. Data prior to 2011 not comparable.*

Hypertension by Race/Ethnicity and Gender, Orange County, 2011-12



**Estimate unstable*

Hypertension by Age Group, Orange County, 2011-12



Source: California Health Interview Survey; Behavioral Risk Factor Surveillance Survey

Adolescent Body Composition

Impact: In 2011/12, **65.5% of Orange County 9th graders** (61.8% of males and 69.3% of females) had a body composition within the Healthy Fitness Zone.

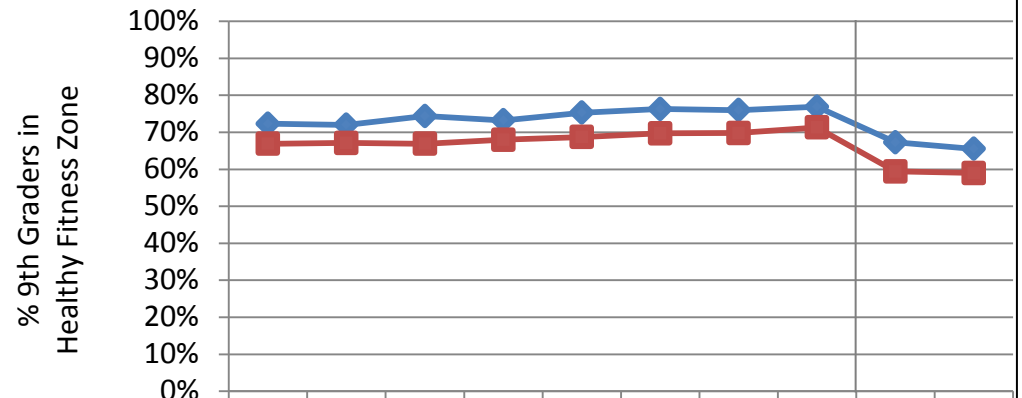
Description of Indicator: This indicator measures the proportion of 9th grade students in public schools who have a body weight within the Healthy Fitness Zone as determined by the California Department of Education, Physical Fitness Test.

Importance of Indicator: The vast majority of adolescents who do not have a healthy body weight are overweight or obese. Obesity is the 2nd leading behavioral contributor to death in the United States [6]. Since 1980, obesity has doubled among U.S. adults [7] and more than tripled among U.S. children [8]. Today's children may lead less healthy lives and have shorter life spans than their parents due largely to heart disease, cancers, stroke, and diabetes associated with obesity [9].

Healthy People 2020 Goal [LHI]: Not comparable to data shown.

Technical Note: *Definition of Healthy Fitness Zone changed in 2010/11. Years before 2010/11 are not comparable with those after. Data by race/ethnicity and gender are not available. Sub-county geographic detail is not available.*

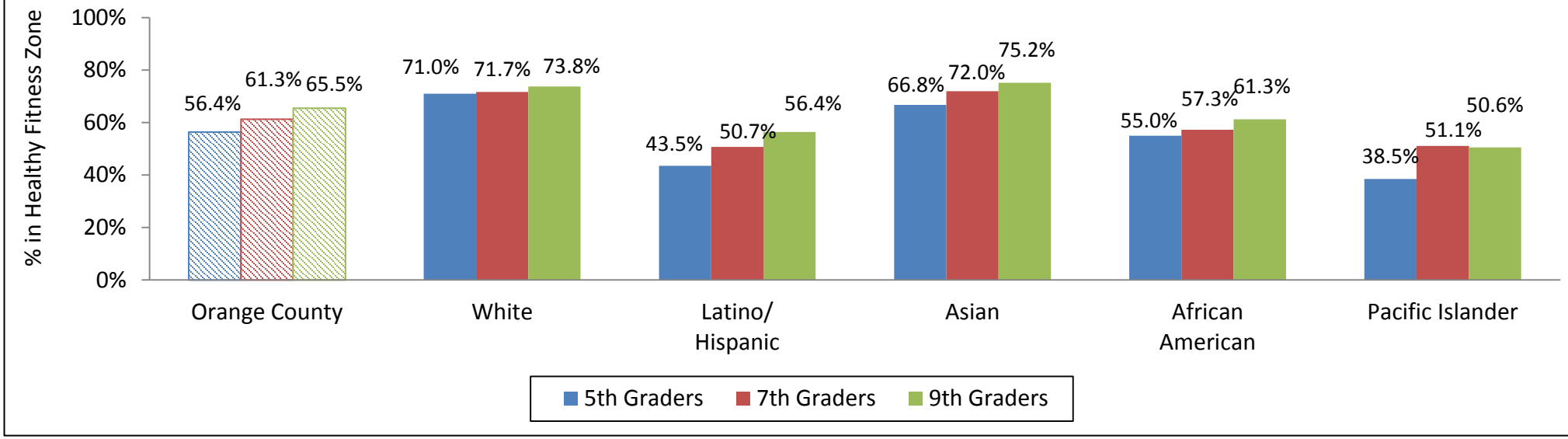
Adolescent Body Composition (9th Graders), 2002/03-2011/12



	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10	2010/11*	2011/12*
Orange County	72.3%	72.0%	74.4%	73.2%	75.3%	76.3%	76.0%	76.9%	67.3%	65.5%
CA	66.9%	67.1%	66.9%	68.0%	68.7%	69.7%	69.8%	71.3%	59.4%	59.0%

Definition of Healthy Fitness Zone changed in 2010/11; data prior to 2010/11 not comparable.

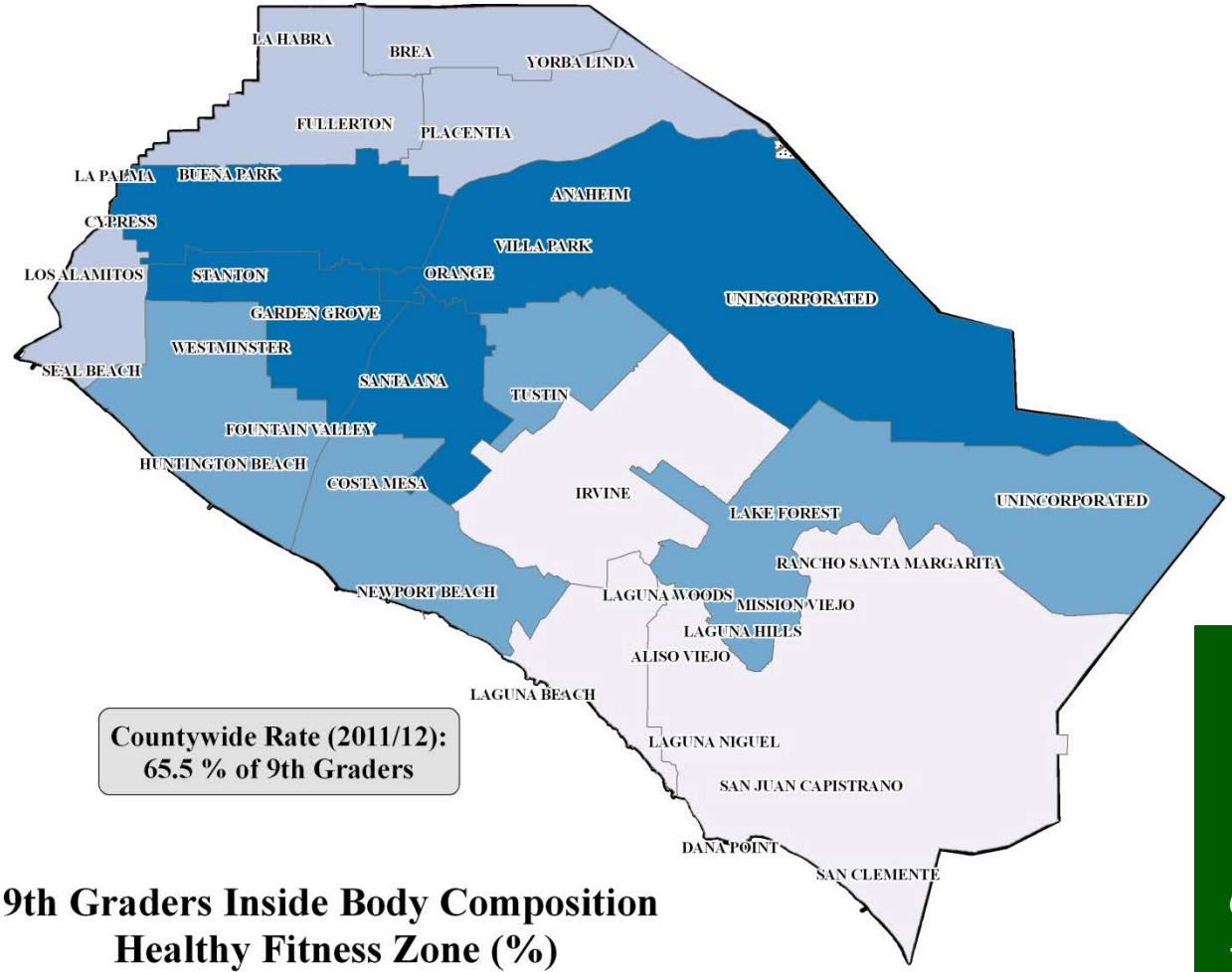
Adolescent Body Composition by Race/Ethnicity and Grade Level, Orange County, 2011/12



Sources: California Department of Education, Physical Fitness Test

School District	% 9th Graders in Health Fitness Zone, for Body Composition, 2011/12
Laguna Beach Unified	87.0%
Irvine Unified	80.9%
Capistrano Unified	75.3%
Placentia-Yorba Linda Unified	72.7%
Los Alamitos Unified	70.2%
Fullerton Joint Union High	69.6%
Brea-Olinda Unified	67.7%
Saddleback Valley Unified	67.0%
Huntington Beach Union High	66.9%
Newport-Mesa Unified	66.8%
Tustin Unified	66.1%
Orange County	65.5 %
Orange Unified	60.7%
Garden Grove Unified	60.1%
Anaheim Union High	58.4%
Santa Ana Unified	51.5%

Orange County Adolescent Body Composition (2011/12)
Percent of 9th Graders Inside Healthy Fitness Zone for Body Composition



Source: 2011/12, California Physical Fitness Test

Adult Obesity

Impact: In 2011-2012, **23.8% of adults** 20 years and older (25.0% of males and 22.6% of females) in Orange County were estimated to be obese.

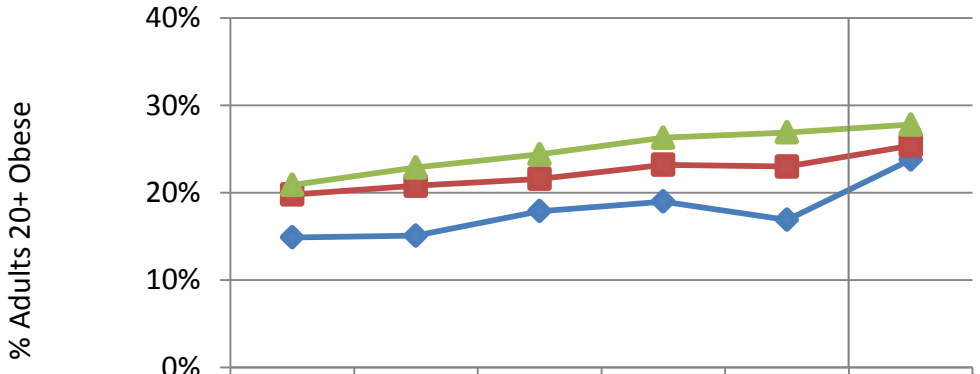
Description of Indicator: This indicator measures the proportion of adults 20 years and older who report height and weight suggestive of obesity (BMI >=30) as reported through the California Health Interview Survey (CHIS).

Importance of Indicator: Obesity is the 2nd leading behavioral contributor to death in the United States [10], increasing risk of coronary heart disease, diabetes, hypertension, certain cancers, stroke and several other conditions [11]. Since 1980, obesity has doubled among U.S. adults and more than tripled among U.S. children [11].

Healthy People 2020 Goal [LHI]: Not comparable with data shown.

Technical Note: *In 2011, CHIS began continuous data collection with two-year reporting cycles. Orange County and California estimates are for 2011-12 while United States estimates are reported from the Behavioral Risk Factor Surveillance System for 2011 only. Data after 2009 are not directly comparable to previous years due to changes in methodology. Sub-county geographic detail is not available.*

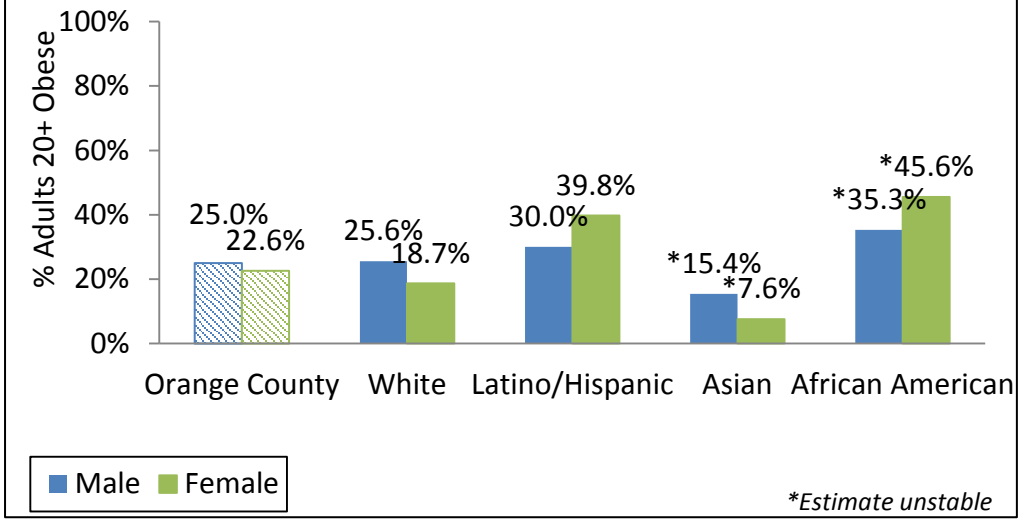
Obesity Prevalence, 2001 – 2011-12*



	2001	2003	2005	2007	2009	2011-12*
Orange County	14.9%	15.1%	17.9%	19.0%	16.9%	23.8%
CA	19.8%	20.8%	21.6%	23.2%	23.0%	25.4%
US	20.9%	22.9%	24.4%	26.3%	26.9%	27.8%

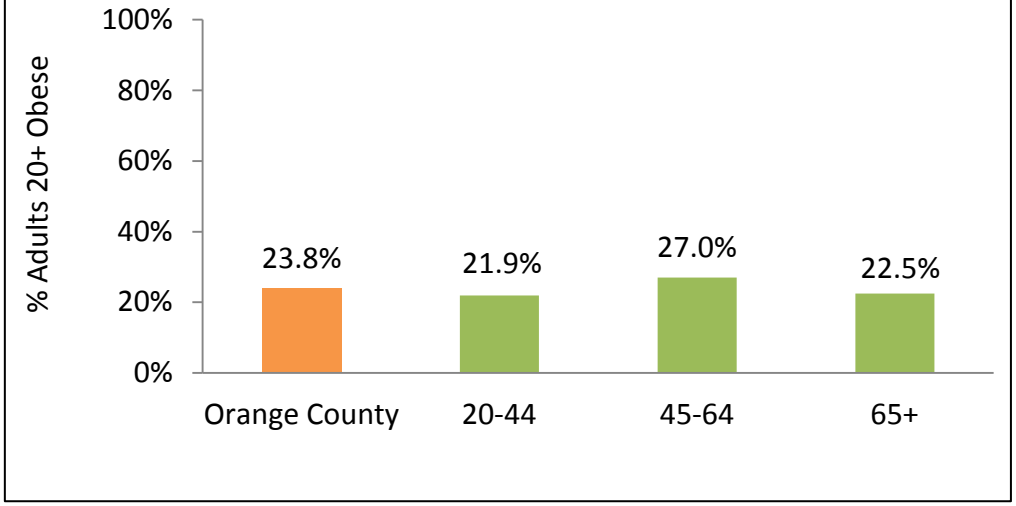
** Orange County and California estimates are for 2011-12 while United States estimates are for 2011 only. Data prior to 2011 not comparable.*

Obesity by Race/Ethnicity and Gender, Orange County, 2011-12



**Estimate unstable*

Obesity Prevalence by Age Group, Orange County, 2011-12



Sources: California Health Interview Survey; Behavioral Risk Factor Surveillance Survey

Asthma Hospitalizations in Children Under 5

Impact: In 2010, there were **367 hospitalizations** due to asthma in children under age 5 for a rate of 19.3 per 10,000.

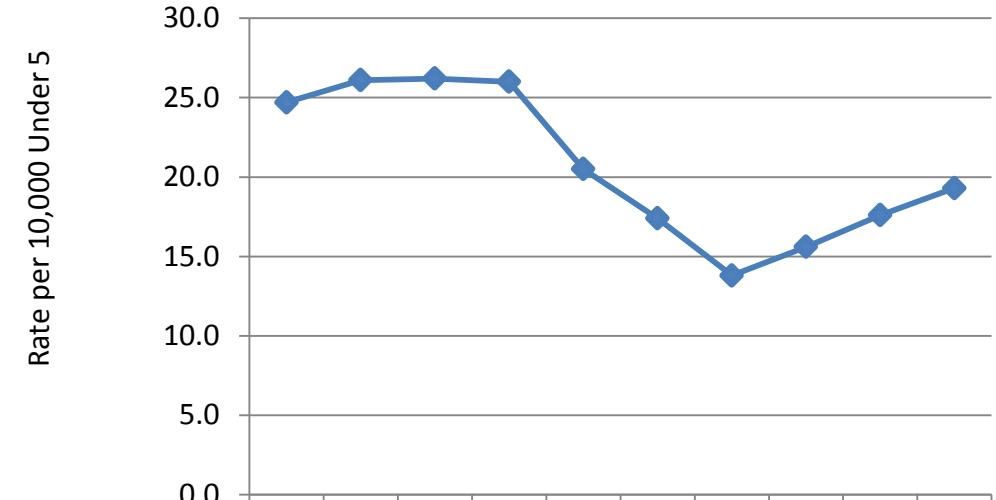
Description of Indicator: This indicator measures the rate of hospitalizations per 10,000 population under age 5 due to asthma based on the Office of Statewide Health Planning and Development hospital discharge database.

Importance of Indicator: Asthma is one of the most common chronic disorders in childhood [12] and a leading cause of hospitalizations [13]. Asthma hospitalizations are often preventable with proper management and appropriate health care [14]. Factors that may make asthma symptoms worse include exposure to smoke, dust, air pollution, pets, and mold, among others [15].

Healthy People 2020 Goal: Reduce hospitalizations for asthma among children under age 5 years from 42.4 per 10,000 in 2007 to 18.1 per 10,000.

Technical Note: *Data is not robust enough to show race/ethnicity by gender. Sub-county geographic detail is not available.*

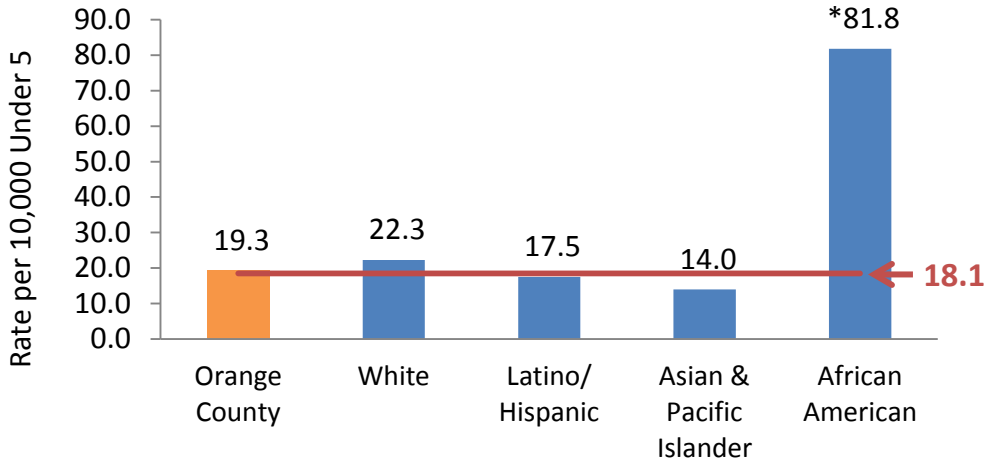
Asthma Hospitalizations in Children Under 5, 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	24.7	26.1	26.2	26.0	20.5	17.4	13.8	15.6	17.6	19.3

Indicates Healthy People 2020 Goal

Asthma Hospitalizations in Children Under 5 by Race/Ethnicity, Orange County, 2010



**Estimate unstable*

Comparison by age group not indicated.

Sources: Office of Statewide Health Planning and Development Database

Heart Disease Deaths

Impact: In 2010, **2,976 deaths** were caused by heart disease in Orange County, which was a leading cause of death, accounting for 17% of deaths in the county.

Description of Indicator: This indicator measures the rate of deaths per 100,000 population due to ischemic heart disease based on the Orange County Master Death File. Ten-year trends and rates by race/ethnicity adjust for age.

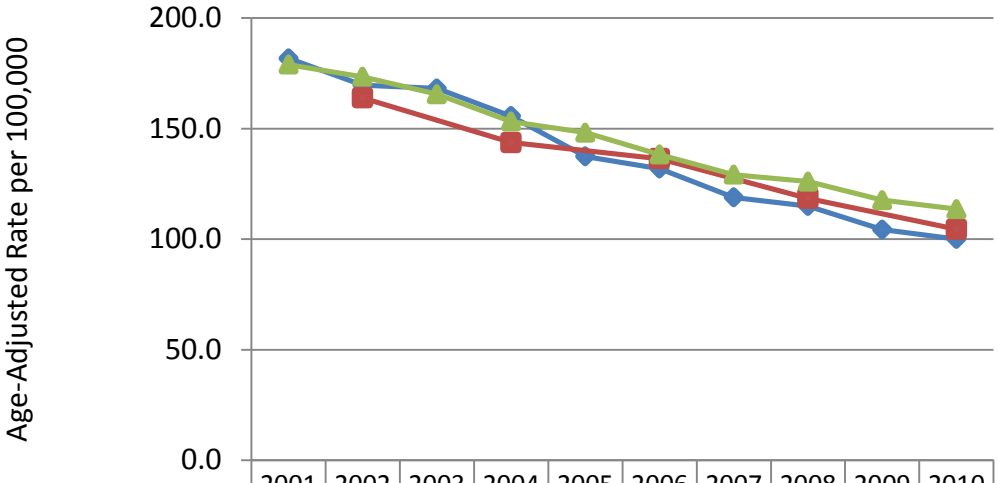
Importance of Indicator: Heart disease is the leading cause of death in Orange County. Risk factors that may lead to heart disease include high blood pressure, high cholesterol, and smoking [16].

Healthy People 2020 Goal: Reduce coronary heart disease deaths from 126.0 per 100,000 population in 2007 (age adjusted) to 100.8 per 100,000.

Technical Note: *ICD 10 codes for Healthy People 2020 Goal for coronary heart disease (I20-I25) are equivalent to codes used for Ischemic Heart Disease. Sub-county geographic detail is not shown.*

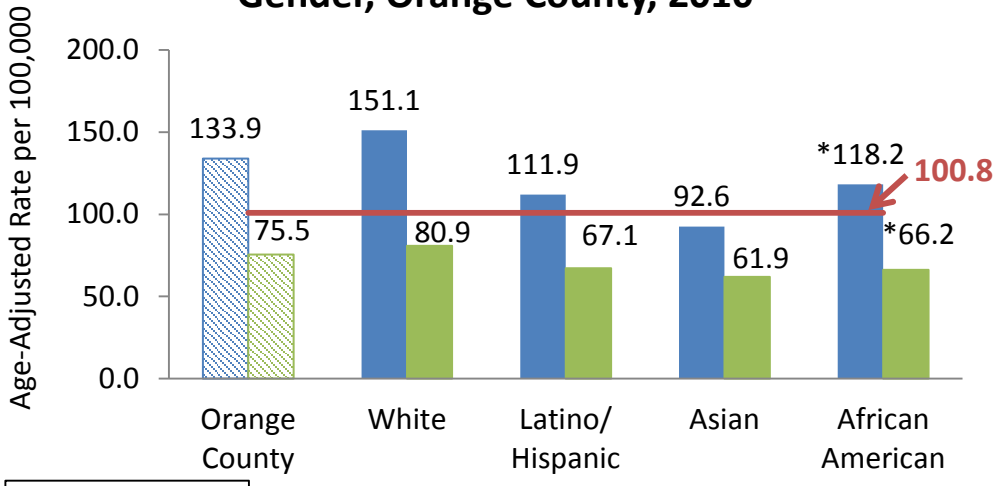
Indicates Healthy People 2020 Goal

Heart Disease Deaths, 2001-2010



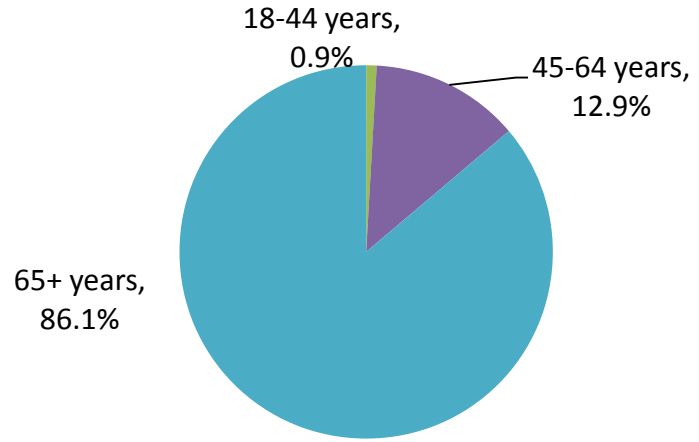
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	181.8	169.7	168.2	155.7	137.4	131.9	118.9	115.0	104.4	100.1
CA		163.9		143.7		136.4		118.5		104.5
US	179.0	173.5	165.6	153.2	148.2	138.3	129.2	126.1	117.7	113.6

Heart Disease Deaths by Race/Ethnicity and Gender, Orange County, 2010



**Estimate unstable*

Proportion of All Heart Disease Deaths by Age Group, Orange County, 2010



Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

Cerebrovascular Disease (Stroke) Deaths

Impact: In 2010, **1,057 deaths** were caused by strokes in Orange County, which was the 3rd leading cause of death, accounting for 6% of deaths in the county.

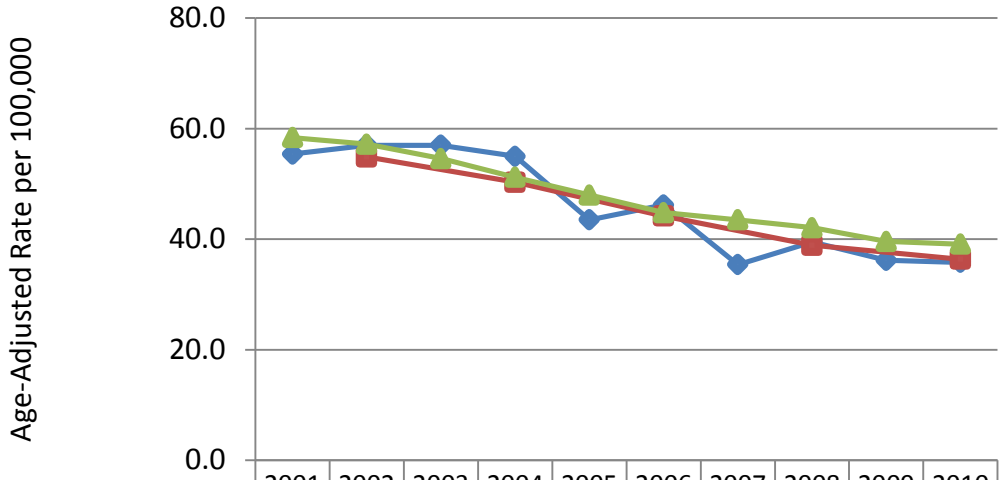
Description of Indicator: This indicator measures the rate of deaths per 100,000 population due to cerebrovascular disease based on the Orange County Master Death File. Ten-year trends and rates by race/ethnicity adjust for age.

Importance of Indicator: A stroke occurs when a clot blocks the blood supply to the brain or when a blood vessel the brain bursts. Stroke is the 3rd leading cause of death in Orange County, and it is a major cause of disability as well. Risk factors that may lead to stroke include high blood pressure, high cholesterol, and smoking [17].

Healthy People 2020 Goal: Reduce stroke deaths from 42.2 per 100,000 population in 2007 (age adjusted) to 33.8 per 100,000.

Technical Note: *Sub-county geographic detail is not shown.*

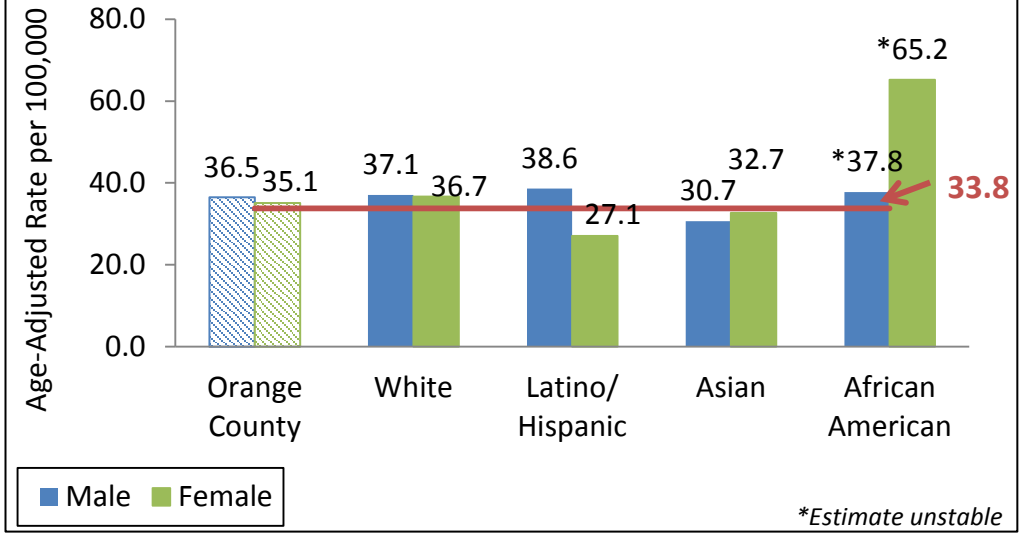
Cerebrovascular Deaths, 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	55.4	57.0	57.0	55.0	43.5	46.2	35.4	39.5	36.2	35.8
CA		54.9		50.3		44.2		38.9		36.4
US	58.4	57.2	54.6	51.2	48.0	44.8	43.5	42.1	39.6	39.1

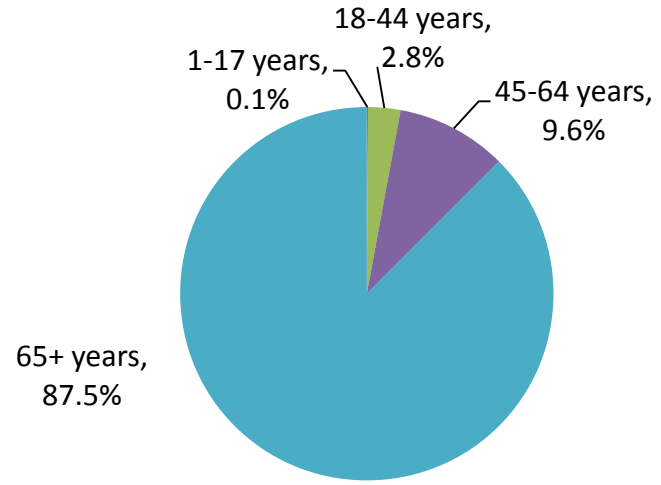
Indicates Healthy People 2020 Goal

Cerebrovascular Deaths by Race/Ethnicity and Gender, Orange County, 2010



**Estimate unstable*

Proportion of All Cerebrovascular Disease Deaths by Age Group, Orange County, 2010



Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

Alzheimer's Disease Deaths

Impact: In 2010, **1,000 deaths** were caused by Alzheimer's disease in Orange County, which was the 4th leading cause of death, accounting for 5% of deaths in the county.

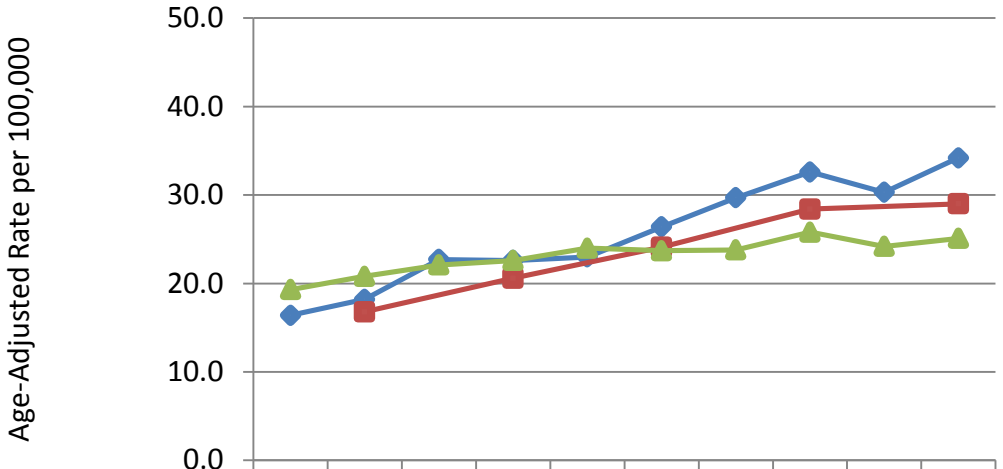
Description of Indicator: This indicator measures the rate of deaths per 100,000 population due to Alzheimer's disease based on the Orange County Master Death File. Ten-year trends and rates by race/ethnicity adjust for age.

Importance of Indicator: Alzheimer's disease (AD) is the 4th leading cause of death in Orange County, and is an incurable degenerative disease. Locally and nationally, mortality rates for Alzheimer's disease are on the rise, in contrast to other leading causes of death [18]. Although being over 65 years of age and having a family history of AD are known risk factors, the exact cause of AD is not known [19], making it difficult to develop interventions.

Healthy People 2020 Goal: No comparable goal.

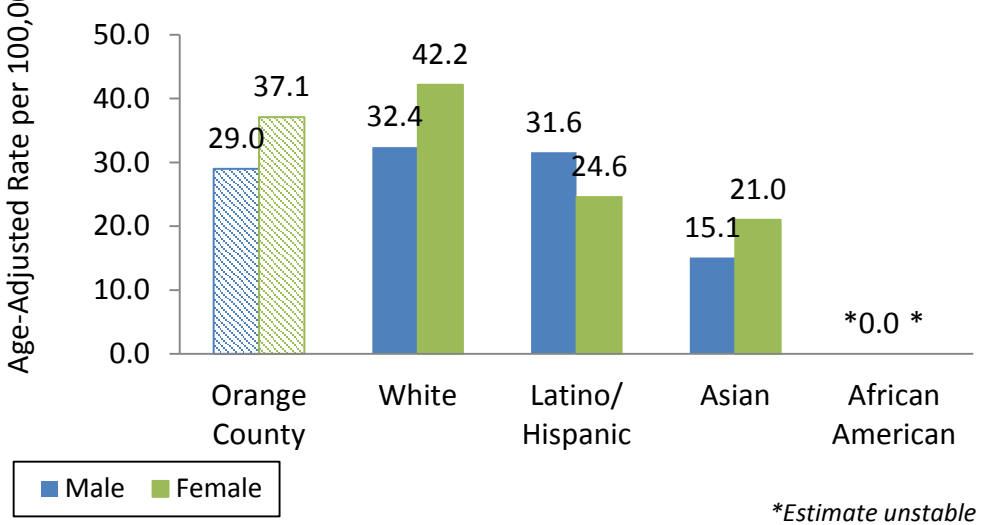
Technical Note: *Sub-county geographic detail is not shown.*

Alzheimer's Disease Deaths, 2001-2010



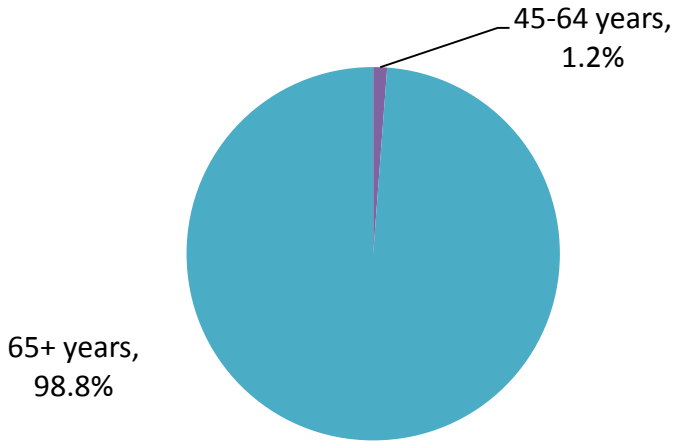
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	16.4	18.2	22.7	22.6	23.0	26.4	29.7	32.6	30.3	34.2
CA		16.8		20.6		24.1		28.4		29.0
US	19.3	20.8	22.1	22.6	24.0	23.7	23.8	25.8	24.2	25.1

Alzheimer's Disease Deaths by Race/Ethnicity and Gender, Orange County, 2010



**Estimate unstable*

Proportion of All Alzheimer's Disease Deaths by Age Group, Orange County, 2010



Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

Chronic Lower Respiratory Diseases Deaths

Impact: In 2010, **918 deaths** were caused by chronic lower respiratory diseases (CLRD) in Orange County, which was the 5th leading cause of death, accounting for 5% of deaths in the county.

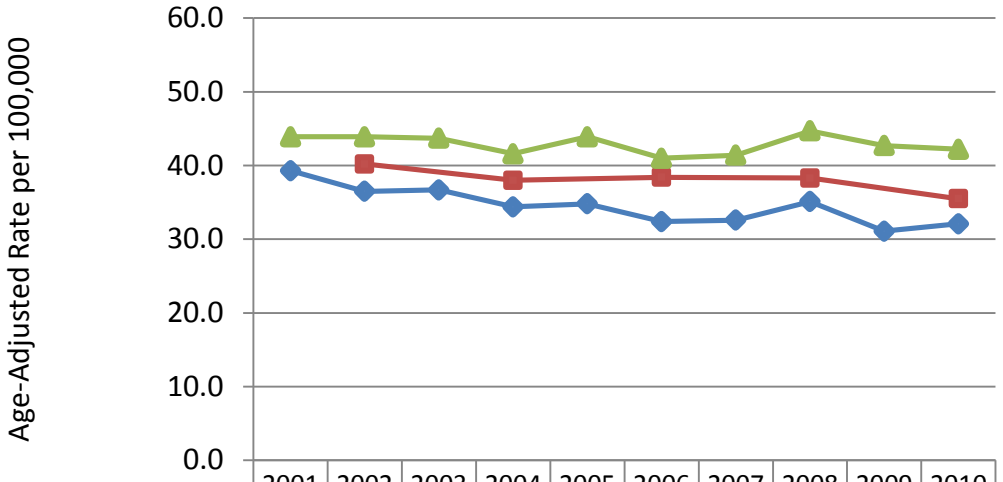
Description of Indicator: This indicator measures the rate of deaths per 100,000 population due to CLRD based on the Orange County Master Death File. Ten-year trends and rates by race/ethnicity adjust for age.

Importance of Indicator: CLRD includes three major diseases - chronic bronchitis, emphysema, and asthma. CLRD is the 5th leading cause of death in Orange County. Chronic obstructive pulmonary disease (COPD), a subset of CLRD, accounts for the vast majority of deaths due to CLRD; as many as 9 out of 10 COPD deaths are caused by smoking [20].

Healthy People 2020 Goal: Not comparable to data shown.

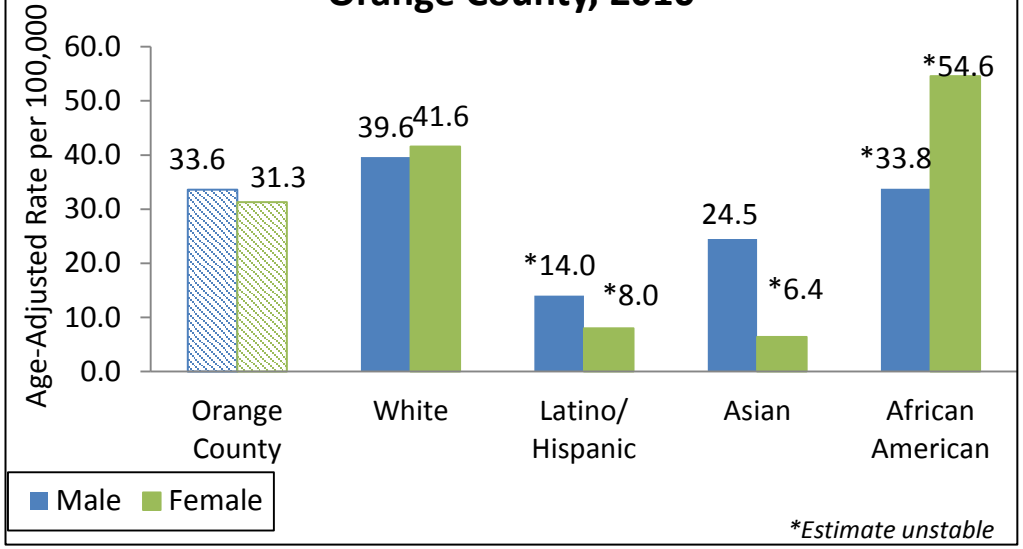
Technical Note: *Sub-county geographic detail is not shown.*

CLRD Deaths, 2001-2010

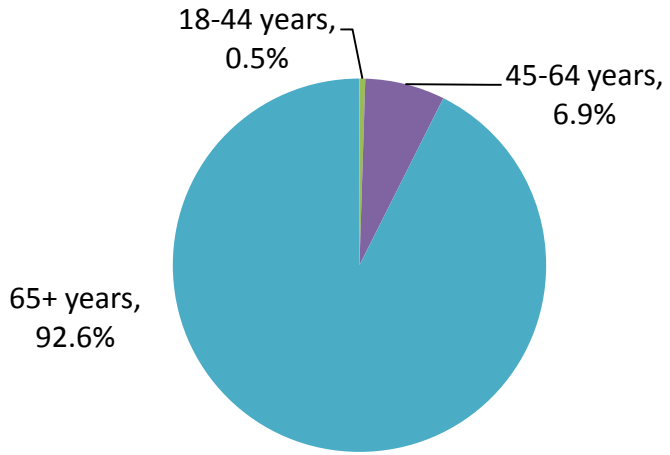


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	39.3	36.5	36.7	34.4	34.8	32.4	32.6	35.1	31.1	32.1
CA		40.2		38.0		38.4		38.3		35.5
US	43.9	43.9	43.7	41.6	43.9	41.0	41.4	44.7	42.7	42.2

CLRD Deaths by Race/Ethnicity and Gender, Orange County, 2010



Proportion of All CLRD Deaths by Age Group, Orange County, 2010



Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

References

Diabetes

1. Centers for Disease Control and Prevention. Diabetes Report Card 2012. Atlanta, GA: Centers for Disease Control and Prevention, U.S. Department of Health and Human Services; 2012.

Hypertension (High Blood Pressure)

2. Stamler J, et al. Blood pressure, systolic and diastolic, and cardiovascular risks. U.S. population data. Arch 4. Intern Med. 1993 Mar 8;153(5):598–615.
3. National Vital Statistics System, National Center for Health Statistics, CDC. Ten leading causes of death by age group, United States, 2010. Atlanta, GA.
4. Department of Public Health, State of California. Ten leading causes of death, death rates, age-adjusted rates and percent changes by sex, California, 2009-2009. Sacramento, CA.
5. Orange County Geographic Health Profile – 2011. Orange County Health Care Agency, Research and Planning. Santa Ana, CA. 2011.

Adolescent Body Composition

6. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA 2004;291:1238-1245. Correction JAMA 2005;293(3):298.
7. Centers for Disease Control and Prevention (CDC). Prevalence of overweight, obesity and extreme obesity among adults: United States, trends 1960-62 through 2005-2006. Health E-Stats, Accessed 9/10. (http://www.cdc.gov/nchs/data/hestat/overweight/overweight_adult.htm)
8. Ogden CL, et al. Prevalence of high body mass index in U.S. children and adolescents, 2007–2008. JAMA 2010;303(3):242–9.
9. Olshansky SJ, et al. A potential decline in life expectancy in the United States in the 21st century. New Engl J Med 2005;352(11):1138-1145.

Adult Obesity

10. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA. 2004;291(10):1238-1245.
11. U.S. Department of Health and Human Services. The Surgeon General's Vision for a Healthy and Fit Nation. Rockville, MD: U.S. Department of Health and Human Services, Office of the Surgeon General, January 2010.

Asthma Hospitalizations in Children Under 5

12. Centers for Disease Control and Prevention: National Center for Health Statistics, National Health Interview Survey Raw Data, 2011. Analysis by the American Lung Association Research and Health Education Division using SPSS and SUDAAN software.
13. Centers for Disease Control and Prevention: National Center for Health Statistics, National Hospital Discharge Survey, 1995-2010. Analysis by the American Lung Association Research and Health Education Division using SPSS software.
14. Fassl BA, et al. The Joint Commission Children's Asthma Care Quality Measures and Asthma Readmissions. Pediatrics 2012;130:3 482-491.
15. Centers for Disease Control and Prevention. Asthma, Common Asthma Triggers. Accessed 8/13. Available at: http://www.cdc.gov/asthma/triggers.html.

References

Heart Disease Deaths

16. Centers for Disease Control and Prevention. Million Hearts: strategies to reduce the prevalence of leading cardiovascular disease risk factors. United States, 2011. MMWR2011;60(36):1248–51.

Cerebrovascular Disease (Stroke) Deaths

17. Centers for Disease Control and Prevention. Million Hearts: strategies to reduce the prevalence of leading cardiovascular disease risk factors. United States, 2011. MMWR2011;60(36):1248–51.

Alzheimer's Disease Deaths

18. Heron MP and Smith BL. Deaths: leading causes for 2003. Nat Vital Stat Rep 2007,55:1-91.
19. Centers for Disease Control and Prevention. Healthy Aging, Alzheimer's Disease. Accessed 8/13. Available at: http://www.cdc.gov/aging/aginginfo/alzheimers.htm..

Chronic Lower Respiratory Diseases Deaths

20. U.S. Department of Health and Human Services. The Health Consequences of Smoking. A Report of the U.S. Surgeon General. 2004.

This page intentionally left blank.

Cancer

Summary of Leading Cancers

In 2010, cancer was the **2nd leading cause of death**, accounting for **4,340 deaths** or one in four deaths in the county according to the Orange County Master Death File.

Below are the leading cancers in the county according to the California Cancer Registry. **Lung cancer** caused the most deaths (990 deaths in 2011), while there were the most cases of **breast cancer** (2,025 cases in 2011).

Orange County's Leading Cancer Deaths	2011 Deaths	2011 Cases
1. Lung and Bronchus Cancer	990	1,280
2. Colon and Rectum Cancer	385	1,185
3. Breast Cancer	330	2,025
4. Prostate Cancer	215	1,410

Source: Orange County Master Death File; California Cancer Registry

Lung Cancer Deaths

Impact: In 2010, **988 deaths** were caused by lung cancer in Orange County, which accounted for 5% of deaths in the county and 23% of all cancer deaths.

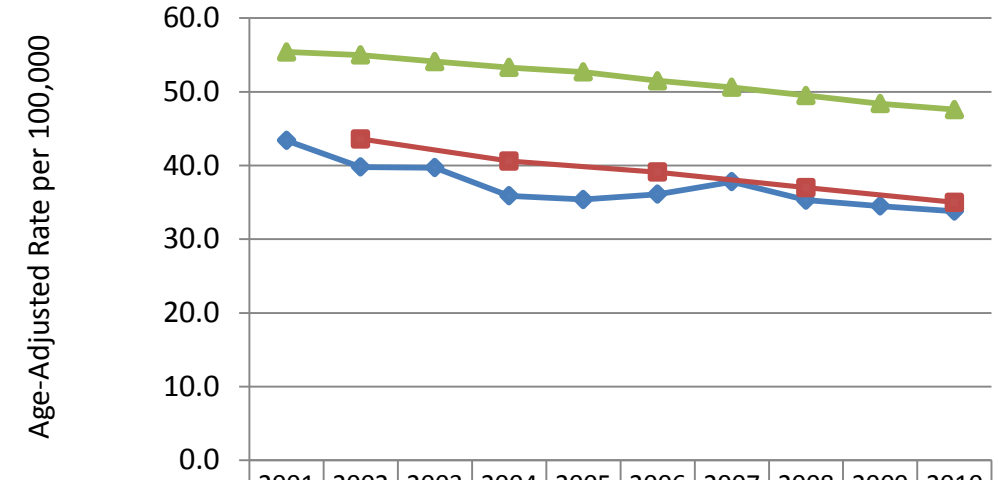
Description of Indicator: This indicator measures the rate of deaths per 100,000 population due to lung cancer based on the Orange County Master Death File. Ten-year trends and rates by race/ethnicity adjust for age.

Importance of Indicator: Lung cancer is the leading cause of cancer death among both men and women in Orange County [1]. Smoking or exposure to second hand smoke is a major risk factor for lung cancer [2], making the disease eminently preventable.

Healthy People 2020 Goal: Reduce lung cancer death rate from 50.6 lung cancer deaths per 100,000 population (age-adjusted) in 2007 to 45.5 deaths per 100,000 population.

Technical Note: *Sub-county geographic detail is not shown.*

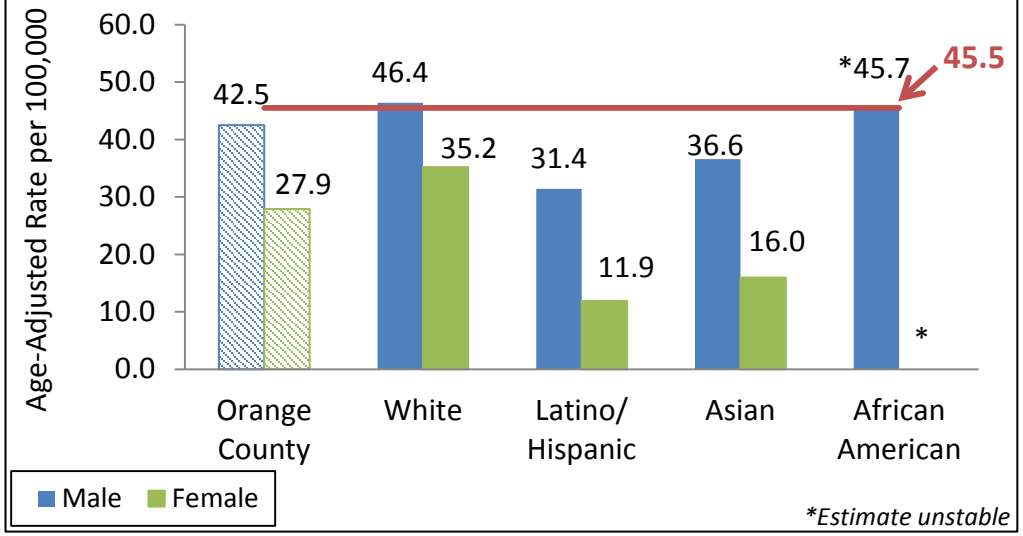
Lung Cancer Deaths, 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	43.4	39.8	39.7	35.9	35.4	36.1	37.8	35.3	34.5	33.8
CA		43.6		40.6		39.1		37.0		35.0
US	55.4	55.0	54.1	53.3	52.7	51.5	50.6	49.5	48.4	47.6

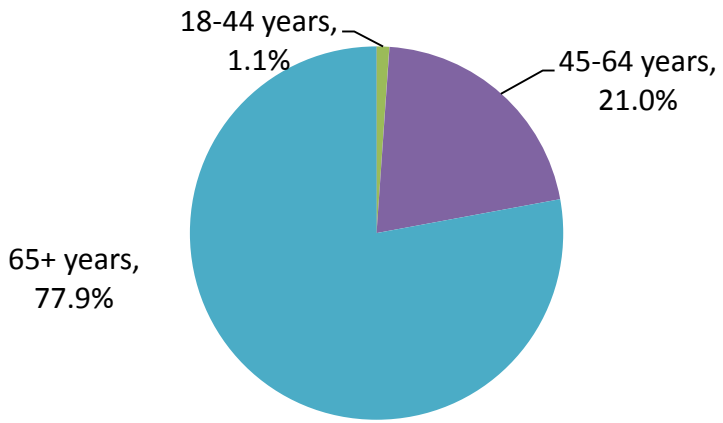
Indicates Healthy People 2020 Goal

Lung Cancer Deaths by Race/Ethnicity and Gender, Orange County, 2010



**Estimate unstable*

Proportion of All Lung Cancer Deaths by Age Group, Orange County, 2010



Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

Colorectal Cancer Screening

Impact: In 2009, **72.4% of adults ages 50 to 75** (73.8% of males and 71.0% of females) in Orange County reported being compliant with colorectal cancer screening recommendations.

Description of Indicator: This indicator measures the proportion of adults, 50 to 75 years of age, who report being compliant with colorectal cancer screening recommendations, as reported through the California Health Interview Survey.

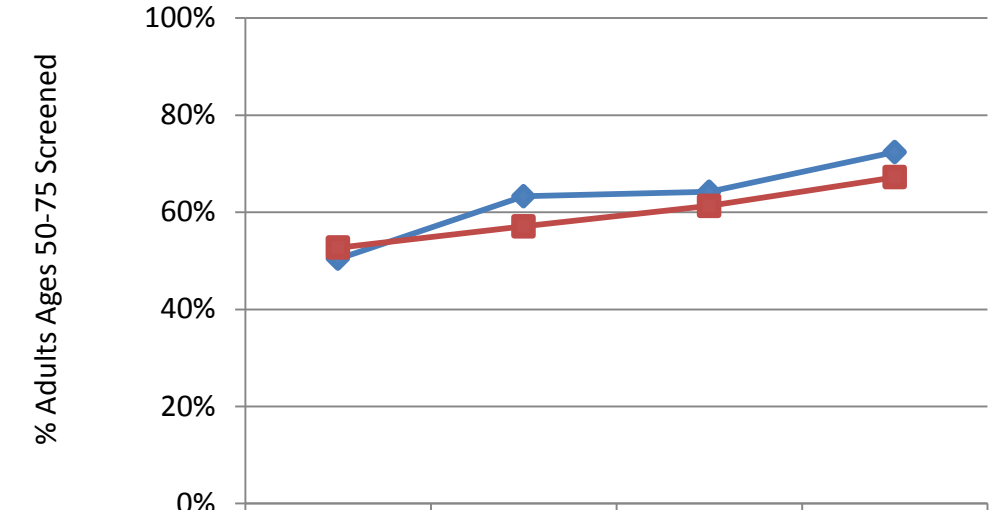
Importance of Indicator: Colorectal cancer is the 2nd most common cause of cancer death in Orange County [3]. Colorectal cancer screenings are effective ways to detect the cancer at earlier and more treatable stages [4]. The chances of surviving colorectal cancer for at least 5 years falls from 90% to 12% when detected at later stages [5].

Healthy People 2020 Goal [LHI]: Increase the proportion of adults aged 50 to 75 years who receive a colorectal cancer screening based on the most recent guidelines from 52.1% in 2008 to 70.5%.

Technical Note: *Sub-county geographic detail is not available.*

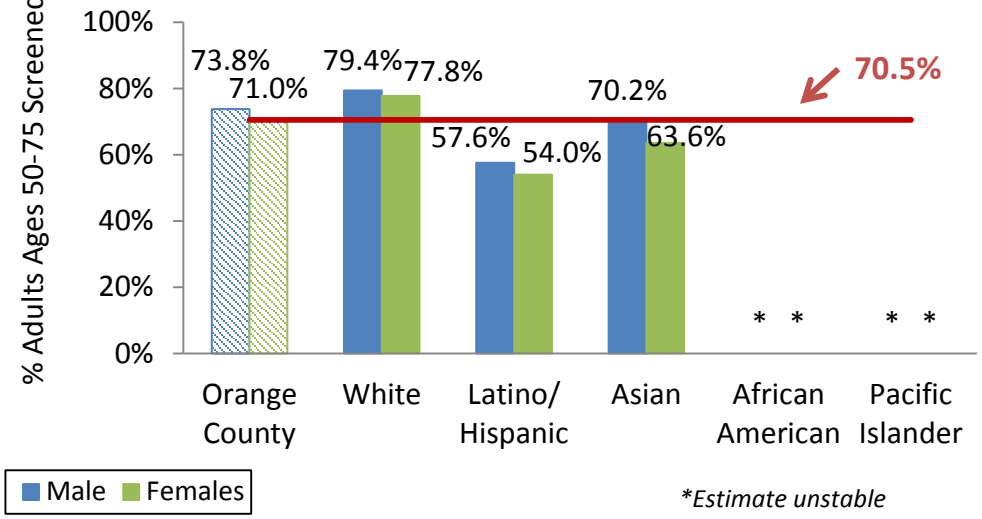
Indicates Healthy People 2020 Goal

Colorectal Cancer Screening, 2003-2009



	2003	2005	2007	2009
Orange County	50.4%	63.3%	64.2%	72.4%
CA	52.7%	57.1%	61.3%	67.2%

Colorectal Screening by Race/Ethnicity and Gender, Orange County, 2009



**Estimate unstable*

Comparison by age group not indicated.

Source: California Health Interview Survey

Colorectal Cancer Deaths

Impact: In 2010, **391 deaths** were caused by colorectal cancer in Orange County, which accounted for 2% of deaths and 9% of cancer deaths in the county.

Description of Indicator: This indicator measures the rate of deaths per 100,000 population due to colorectal cancer based on the Orange County Master Death File. Ten-year trends and rates by race/ethnicity adjust for age.

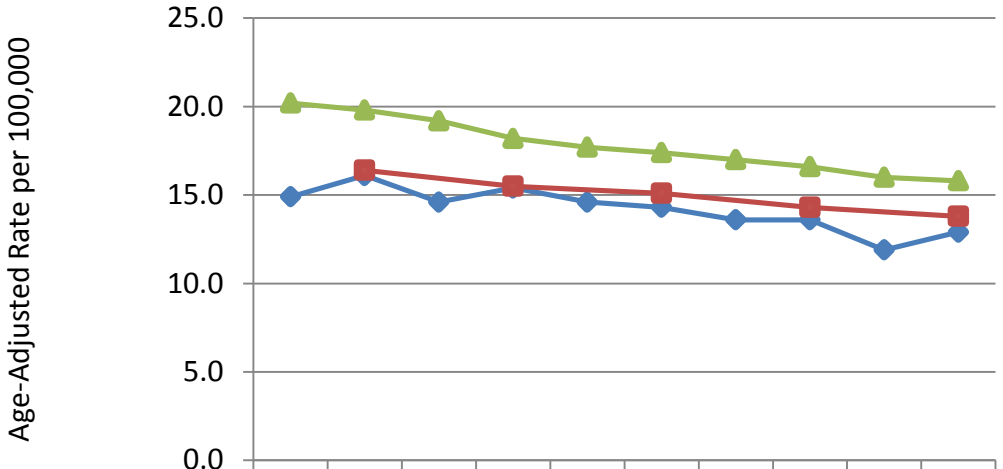
Importance of Indicator: Colorectal cancer is the 4th most common type of cancer and the 2nd most common cause of cancer death in Orange County [6]. Although it is less common than breast or prostate cancer, colon and rectum cancer has a poorer prognosis, which is related to its detection at a later stage [7].

Healthy People 2020 Goal: Reduce colorectal cancer death rate from 17.0 colorectal cancer deaths per 100,000 population (age-adjusted) in 2007 to 14.5 deaths per 100,000.

Technical Note: *Sub-county geographic detail is not shown.*

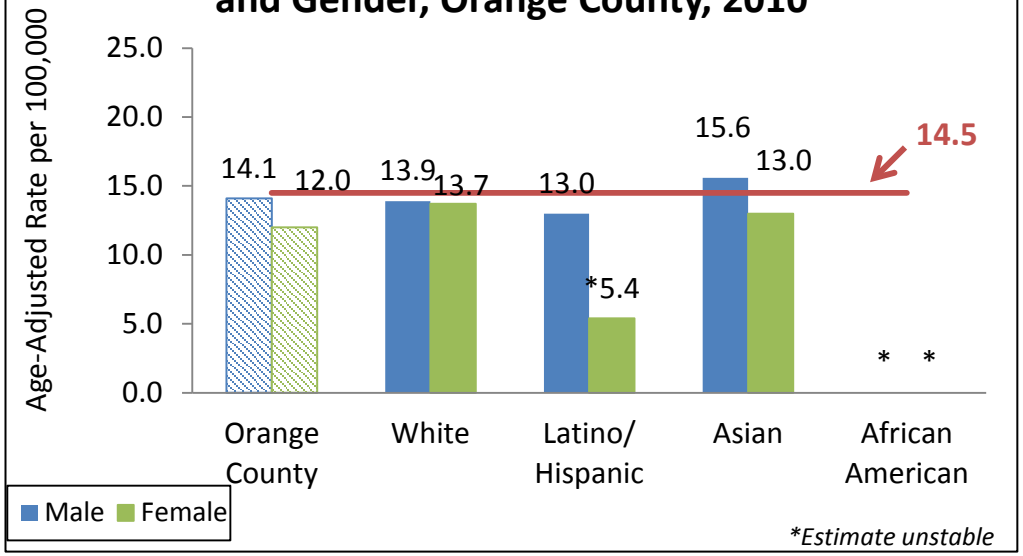
Indicates Healthy People 2020 Goal

Colorectal Cancer Deaths, 2001-2010

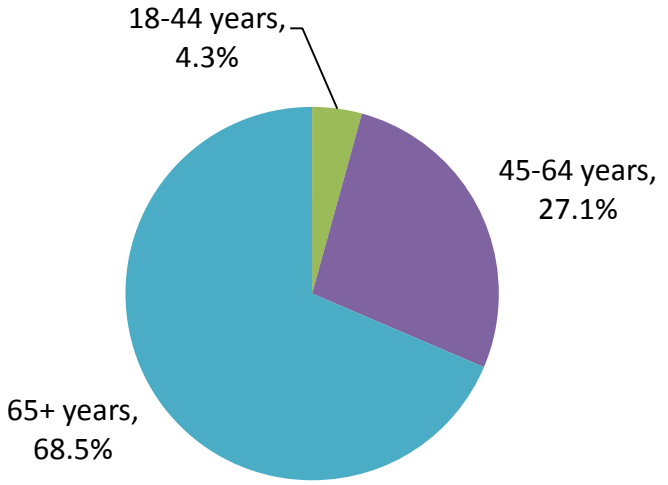


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	14.9	16.1	14.6	15.4	14.6	14.3	13.6	13.6	11.9	12.9
CA		16.4		15.5		15.1		14.3		13.8
US	20.2	19.8	19.2	18.2	17.7	17.4	17.0	16.6	16.0	15.8

Colorectal Cancer Deaths by Race/Ethnicity and Gender, Orange County, 2010



Proportion of All Colorectal Cancer Deaths by Age Group, Orange County, 2010



Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

Breast Cancer Screening

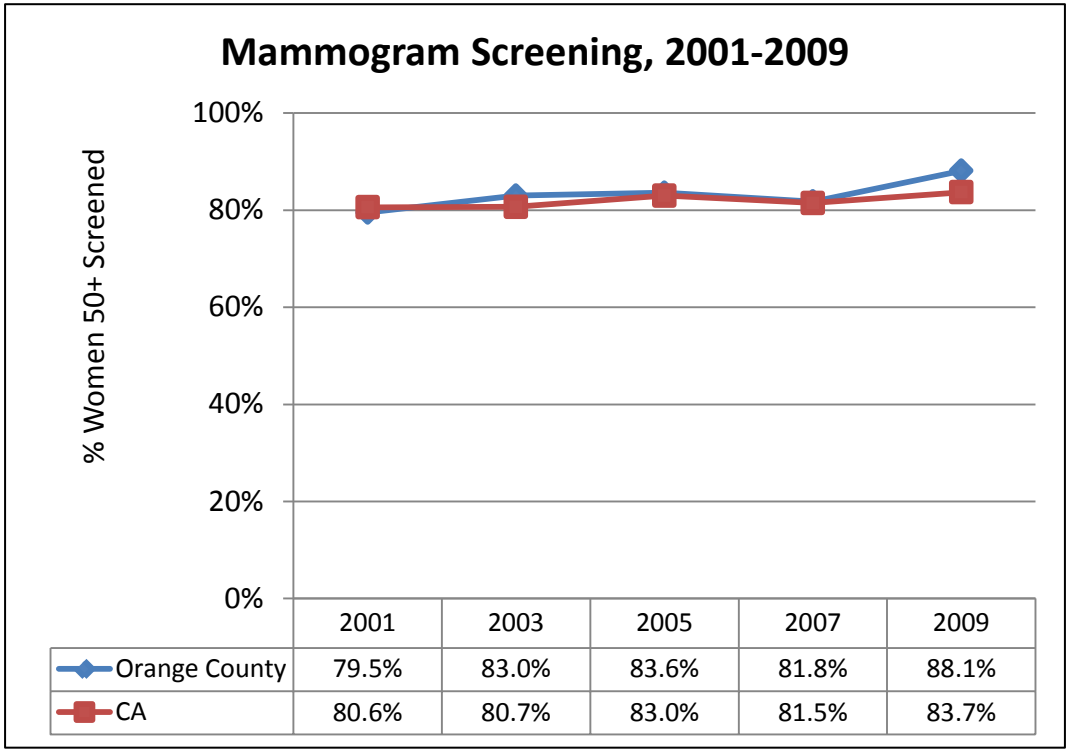
Impact: In 2009, **88.1% of women ages 50 years and older** in Orange County reported having had a mammogram within the past two years.

Description of Indicator: This indicator measures the proportion of women, 50 years of age and older, who report having had a mammogram within the past 2 years, as reported through the California Health Interview Survey.

Importance of Indicator: Breast cancer is the 2nd leading cause of cancer death in women in Orange County [8]. Survival is excellent when diagnosed early. It is recommended that women are screened early through breast exams and mammograms, though guidelines for age and frequency of exams are controversial [9].

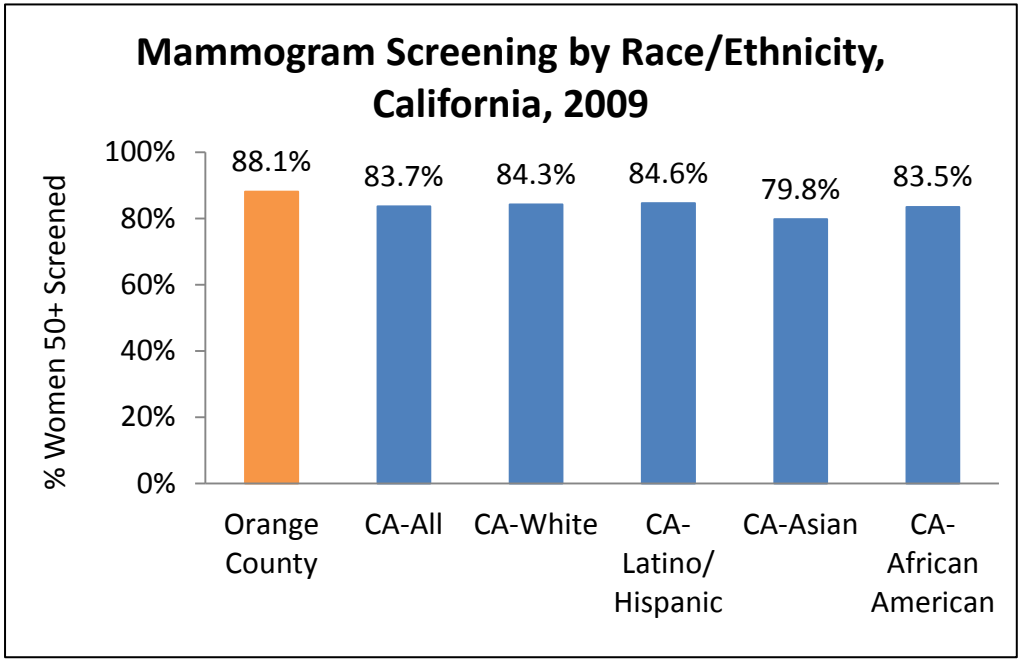
Healthy People 2020 Goal: Not comparable with data shown.

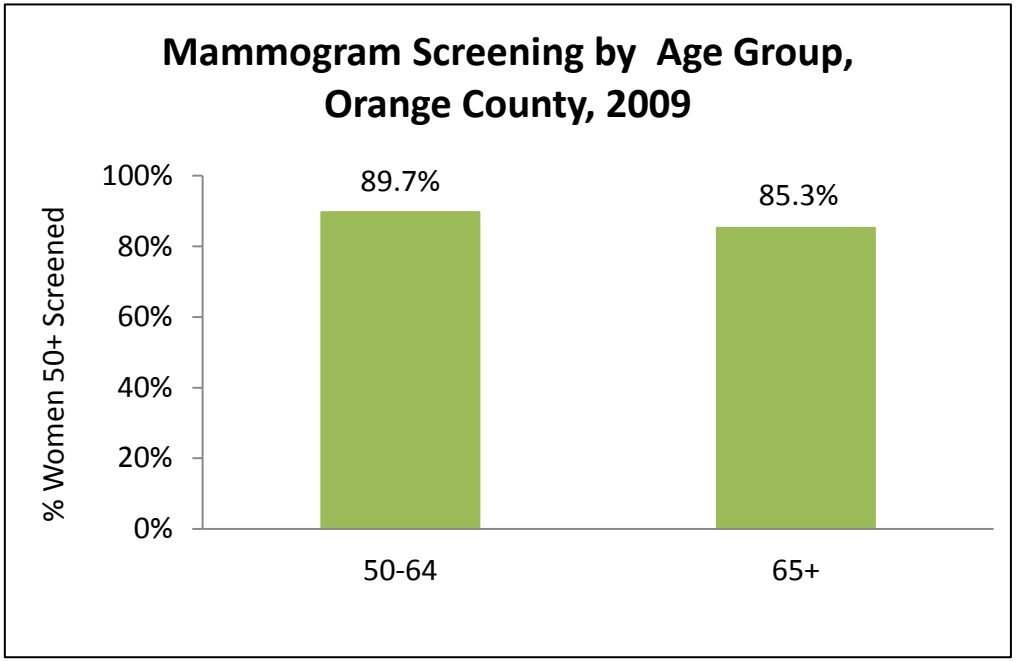
Technical Notes: *California rates shown for comparison of race/ethnicity because Orange County estimates were unstable. Sub-county geographic detail is not available.*



	2001	2003	2005	2007	2009
Orange County	79.5%	83.0%	83.6%	81.8%	88.1%
CA	80.6%	80.7%	83.0%	81.5%	83.7%

Indicates Healthy People 2020 Goal





Source: California Health Interview Survey

Female Breast Cancer Deaths

Impact: In 2010, **359 female deaths** were caused by breast cancer in Orange County, which accounted for 4% of female deaths and 17% of female cancer deaths in the county.

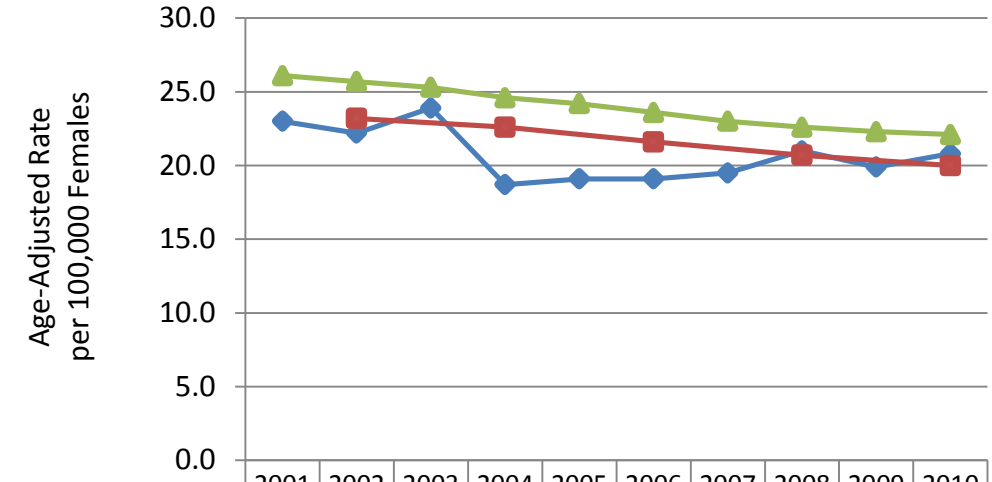
Description of Indicator: This indicator measures the rate of deaths per 100,000 female population due to breast cancer based on the Orange County Master Death File. Ten-year trends and rates by race/ethnicity adjust for age.

Importance of Indicator: Breast cancer is the most common cancer among women and the 2nd leading cause of cancer death in women in Orange County [10]. Survival is excellent when diagnosed early. If confined to the breast when discovered, five-year survival is 100% [11].

Healthy People 2020 Goal: Reduce breast cancer death rate from 22.9 female breast cancer deaths per 100,000 population (age adjusted) in 2007 to 20.6 deaths per 100,000.

Technical Note: *Sub-county geographic detail is not shown.*

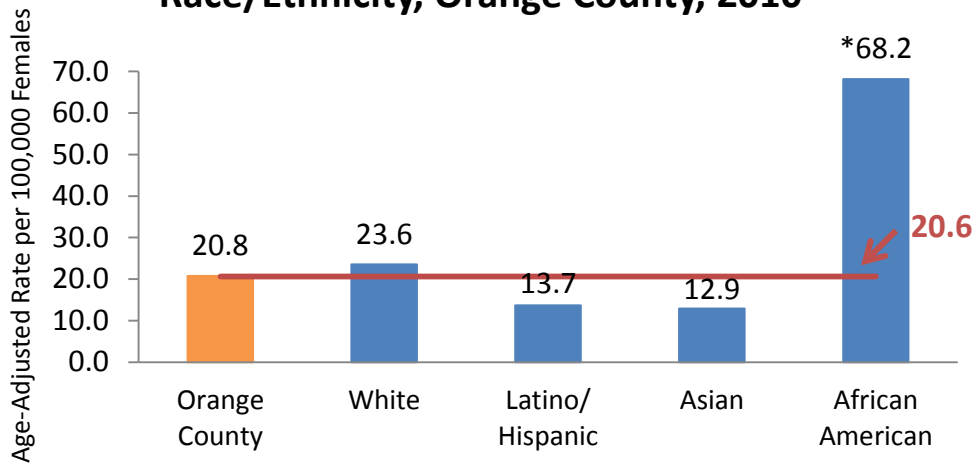
Female Breast Cancer Deaths, 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	23.0	22.2	23.9	18.7	19.1	19.1	19.5	21.0	19.9	20.8
CA		23.2		22.6		21.6		20.7		20.0
US	26.1	25.7	25.3	24.6	24.2	23.6	23.0	22.6	22.3	22.1

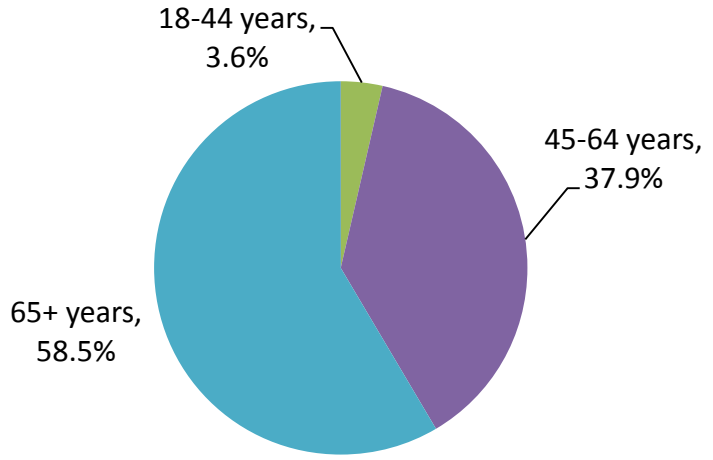
Indicates Healthy People 2020 Goal

Female Breast Cancer Deaths by Race/Ethnicity, Orange County, 2010



**Estimate unstable*

Proportion of All Female Breast Cancer Deaths by Age Group, Orange County, 2010



Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

Prostate Cancer Deaths

Impact: In 2010, **233 deaths** were caused by prostate cancer in Orange County, which accounted for 3% of male deaths and 11% of male cancer deaths in the county.

Description of Indicator: This indicator measures the rate of deaths per 100,000 male population due to prostate cancer based on the Orange County Master Death File. Ten-year trends and rates by race/ethnicity adjust for age.

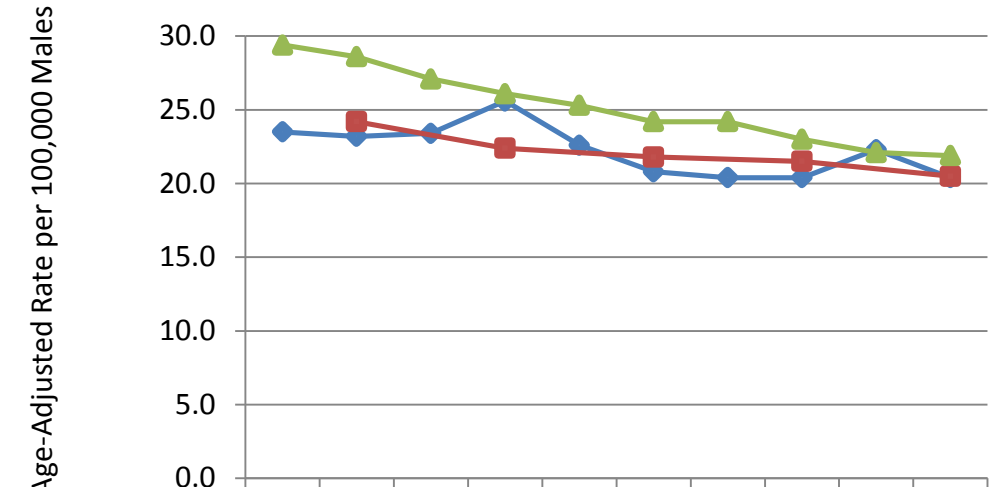
Importance of Indicator: Prostate cancer is the most common cancer among men and the 2nd leading cause of cancer death in men in Orange County [12]. Survival rate for prostate cancer is quite high, especially when diagnosis is early. Screening guidelines by the medical community have been controversial.

Healthy People 2020 Goal: Reduce prostate cancer death rate from 23.5 prostate cancer deaths per 100,000 population (age adjusted) in 2007 to 21.2 deaths per 100,000.

Technical Note: *Sub-county geographic detail is not shown.*

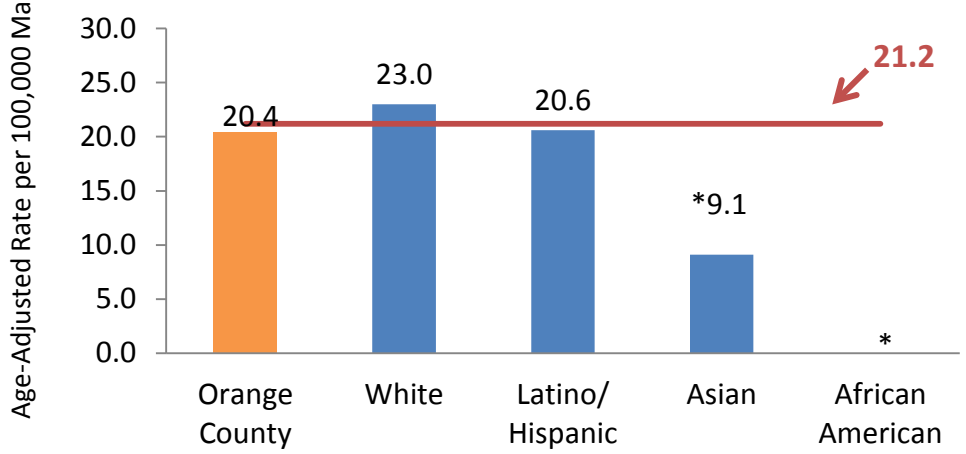
Indicates Healthy People 2020 Goal

Prostate Cancer Deaths, 2001-2010



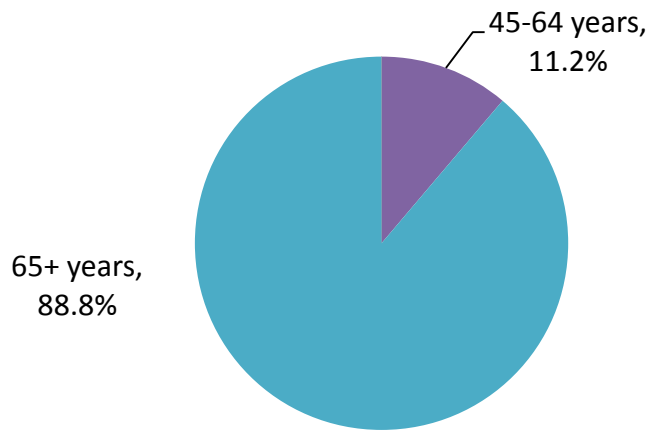
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	23.5	23.2	23.4	25.6	22.6	20.8	20.4	20.4	22.3	20.4
CA		24.2		22.4		21.8		21.5		20.5
US	29.4	28.6	27.1	26.1	25.3	24.2	24.2	23.0	22.1	21.9

Prostate Cancer Deaths by Race/Ethnicity, Orange County, 2010



**Estimate unstable*

Proportion of All Prostate Cancer Deaths by Age Group, Orange County, 2010



Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

References

Lung Cancer Deaths

1. Selected Cancer Facts-Orange County. California Cancer Registry. October 2011. Available at: http://www.ccrcal.org/pdf/factsheets/counties/Orange_CountyFactsheets2011.pdf.
2. U.S. Department of Health and Human Services. The Health Consequences of Smoking. A Report of the U.S. Surgeon General. 2004.

Colorectal Cancer Screening

3. Selected Cancer Facts-Orange County. California Cancer Registry. October 2011. Available at: http://www.ccrcal.org/pdf/factsheets/counties/Orange_CountyFactsheets2011.pdf.
4. US Preventive Services Task Force. Screening for Colorectal Cancer: U.S. Preventive Services Task Force Recommendation Statement. Ann Intern Med. 2008;149:627-637.
5. American Cancer Society. Colorectal Cancer Facts & Figures 2011-2013. Atlanta: American Cancer Society, 2011.

Colorectal Cancer Deaths

6. Selected Cancer Facts-Orange County. California Cancer Registry. October 2011. Available at: http://www.ccrcal.org/pdf/factsheets/counties/Orange_CountyFactsheets2011.pdf.
7. American Cancer Society, California Department of Public Health, California Cancer Registry. California Cancer Facts and Figures 2013. Oakland, CA: American Cancer Society, Inc. California Division, October 2012.

Breast Cancer Screening

8. Selected Cancer Facts-Orange County. California Cancer Registry. October 2011. Available at: http://www.ccrcal.org/pdf/factsheets/counties/Orange_CountyFactsheets2011.pdf.
9. American Cancer Society, California Department of Public Health, California Cancer Registry. California Cancer Facts and Figures 2013. Oakland, CA: American Cancer Society, Inc. California Division, October 2012.

Female Breast Cancer Deaths

10. Selected Cancer Facts-Orange County. California Cancer Registry. October 2011. Available at: http://www.ccrcal.org/pdf/factsheets/counties/Orange_CountyFactsheets2011.pdf..
11. American Cancer Society, California Department of Public Health, California Cancer Registry. California Cancer Facts and Figures 2013. Oakland, CA: American Cancer Society, Inc. California Division, October 2012.

Prostate Cancer Deaths

12. Selected Cancer Facts-Orange County. California Cancer Registry. October 2011. Available at: http://www.ccrcal.org/pdf/factsheets/counties/Orange_CountyFactsheets2011.pdf.
13. American Cancer Society, California Department of Public Health, California Cancer Registry. California Cancer Facts and Figures 2013. Oakland, CA: American Cancer Society, Inc. California Division, October 2012.

This page intentionally left blank.

Communicable Diseases

Chlamydia

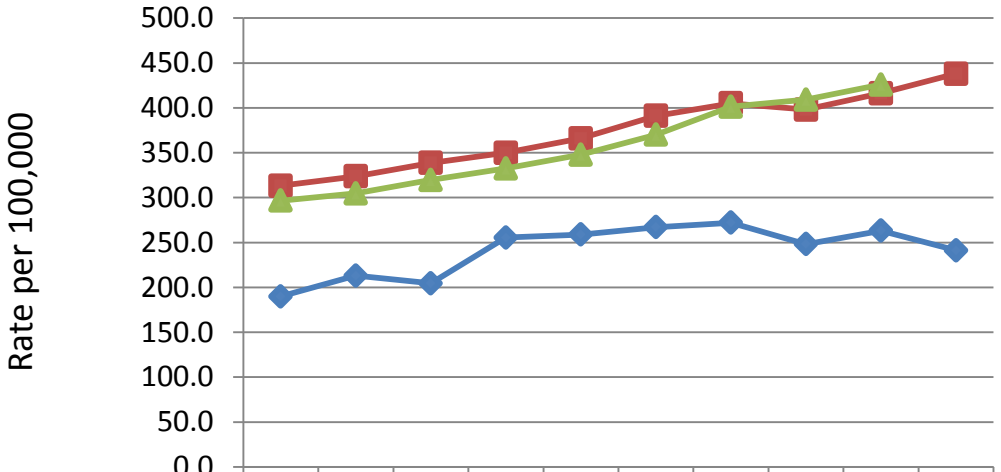
Impact: In 2011, there were **7,827 cases** of chlamydia reported. Of these, 2,348 were among males and 5,479 were among females.

Description of Indicator: This indicator measures the rate of diagnosed chlamydia infections per 100,000 population based on mandated communicable disease reports. Note that this is likely an underestimate due to suboptimal compliance with recommended screening for women aged 15-25.

Importance of Indicator: Untreated Chlamydia infections can cause longer-term health consequences, particularly among women, including chronic pelvic pain, ectopic pregnancies, and infertility [1]. This can occur even in the absence of symptoms, making routine screening important [1]. Chlamydia infection also increases susceptibility to other STDs including HIV [2].

Healthy People 2020 Goal: Not comparable with data shown.

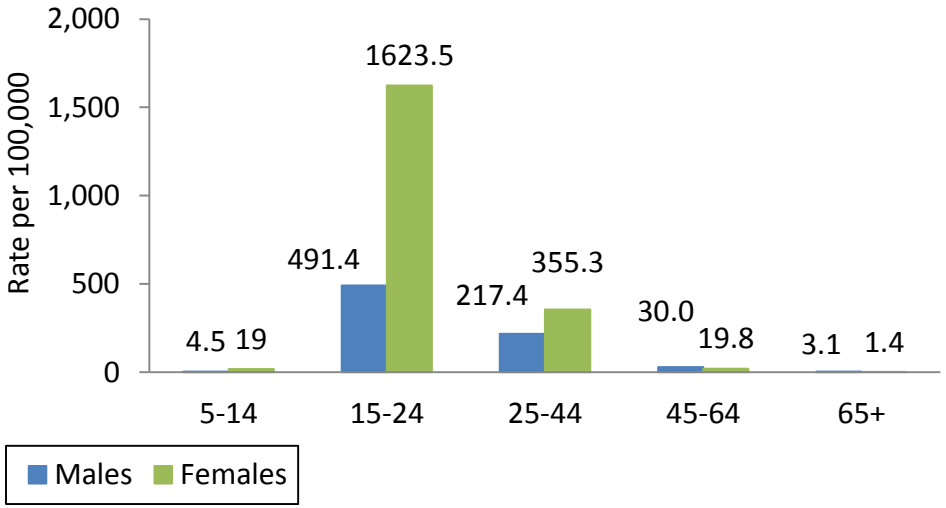
New Cases of Chlamydia, 2002-2011



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Orange County	190.0	213.1	204.5	255.4	258.9	267.1	272.0	248.2	263.1	241.3
CA	313.2	323.8	338.7	350.0	366.0	391.2	405.0	398.1	416.3	438.0
US	296.6	304.7	319.6	332.5	347.8	370.2	401.3	409.2	426.0	

Comparison by Race/Ethnicity not shown due to underreporting of race/ethnicity data.

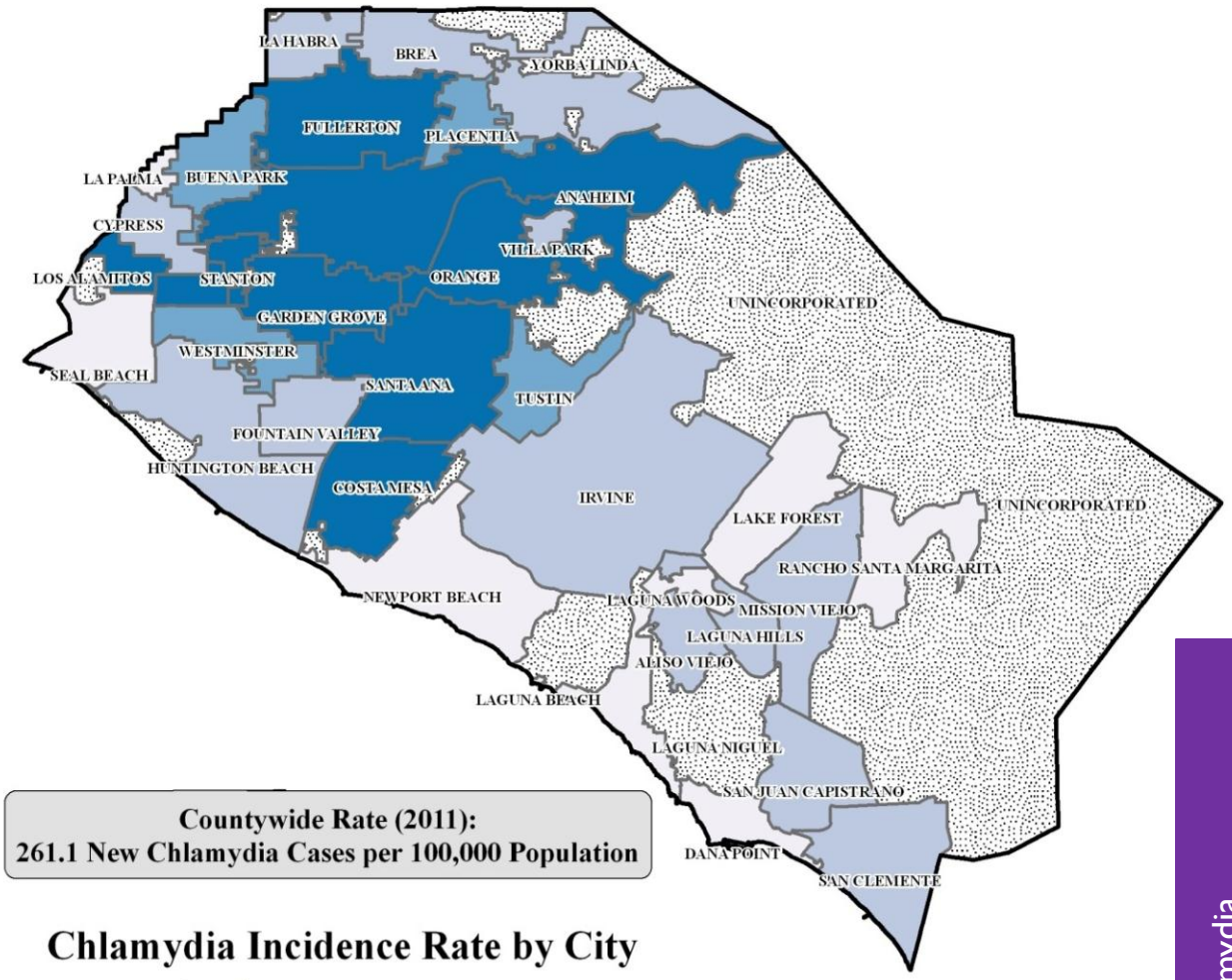
New Cases of Chlamydia by Age Group, Orange County, 2011



Source: OC Epidemiology and Assessment; CDPH STD Control Branch; CDC

City	Chlamydia Cases per 100,000, 2011
Laguna Woods	18.5
Seal Beach	53.8
La Palma	102.8
Dana Point	128.9
Rancho Santa Margarita	133.7
Newport Beach	139.7
Lake Forest	142.4
Laguna Beach	154.0
Yorba Linda	154.1
Mission Viejo	154.3
Cypress	154.8
San Clemente	155.9
Irvine	158.7
Aliso Viejo	165.2
Brea	168.0
Fountain Valley	171.7
Laguna Hills	197.7
Villa Park	206.5
La Habra	220.8
Huntington Beach	225.8
San Juan Capistrano	237.0
Orange County*	261.1
Placentia	261.2
Tustin	270.1
Buena Park	281.9
Westminster	284.3
Fullerton	293.0
Orange	293.2
Los Alamitos	297.0
Costa Mesa	301.0
Garden Grove	306.6
Stanton	364.0
Anaheim	396.4
United States (2010)	426.0
California	438.0
Santa Ana	475.2

Orange County Chlamydia Incidence (2011)
New Cases per 100,000 Population



Countywide Rate (2011):
261.1 New Chlamydia Cases per 100,000 Population

Chlamydia Incidence Rate by City

- 18.5 - 154.0
- 154.1 - 261.1
- 261.2 - 284.3
- 284.4 - 475.2
- Data missing or unstable

Source: 2011, Epidemiology and Assessment, Orange County Health Care Agency

**Orange County rate calculated based on 2010 Census Summary File 1 and differs from rate shown for New Cases of Chlamydia 2002-2011, calculated based on California Department of Finance estimates.*

HIV – New Cases

Impact: In 2011, there were **299 new cases** of HIV diagnosed (271 males, 28 females).

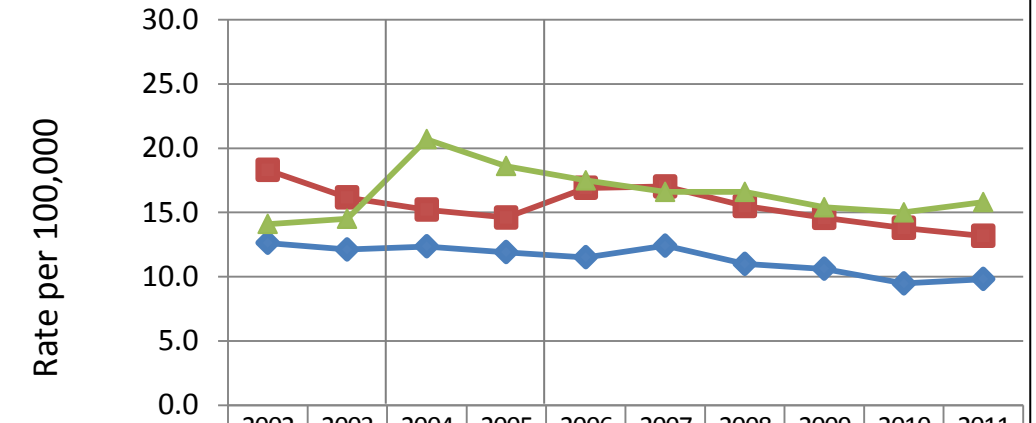
Description of Indicators: This indicator measures the rate of new HIV diagnoses each year per 100,00 population as reported through the Orange County HIV Case Registry as of January 31, 2013.

Importance of Indicator: An estimated 21% of persons who have HIV do not know it [3], and more than 50% of those newly infected with HIV acquired the virus from this group [4]. Identifying those who are infected and getting them into treatment lowers the risk of transmission [5]. Although there is still no cure for HIV, effective treatment can reduce serious illness and death rates [6], but the lifetime cost of treatment is $355,000 per person [7].

Healthy People 2020 Goal: (Developmental – No target set for goal) Reduce new HIV diagnoses among adolescents and adults .

Technical Note: *California shifted from code-based to name-based HIV reporting in 2006. U.S. estimates expanded from AIDS diagnoses to HIV/AIDS diagnoses in 2004.*

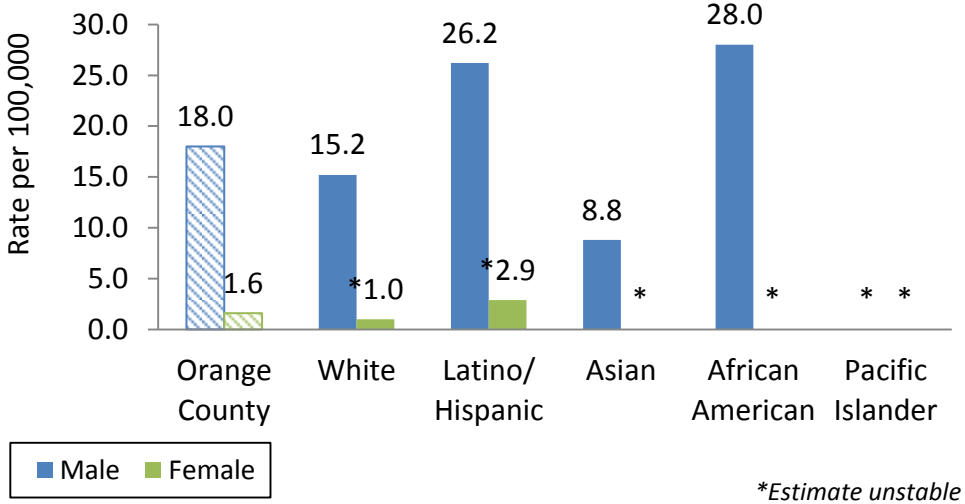
New HIV Cases, 2002-2011



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Orange County	12.6	12.1	12.3	11.9	11.5	12.4	11.0	10.6	9.5	9.8
CA	18.3	16.2	15.2	14.6	16.9	17.0	15.5	14.6	13.8	13.2
US	14.1	14.5	20.7	18.6	17.5	16.6	16.6	15.4	15.0	15.8

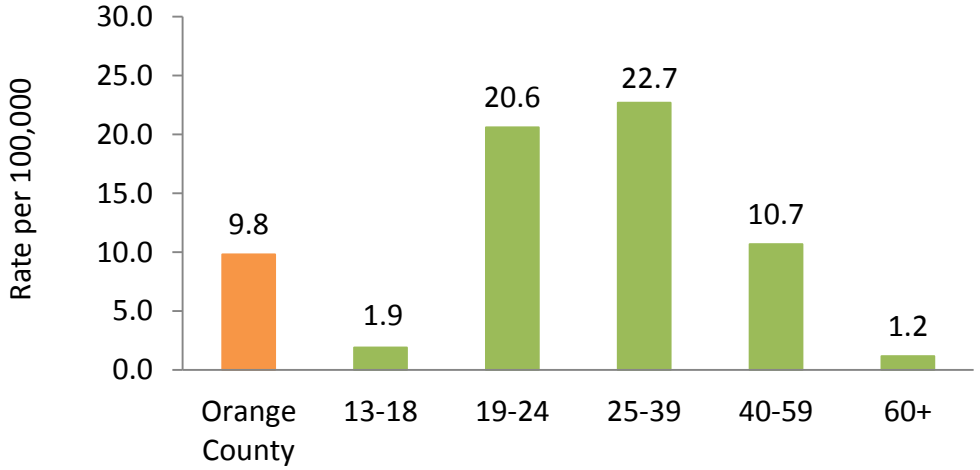
U.S. estimates expanded from AIDS diagnoses to HIV/AIDS diagnoses in 2004 . California shifted from code-based to name-based HIV reporting in 2006.

New HIV Cases by Race/Ethnicity and Gender, Orange County, 2011



**Estimate unstable*

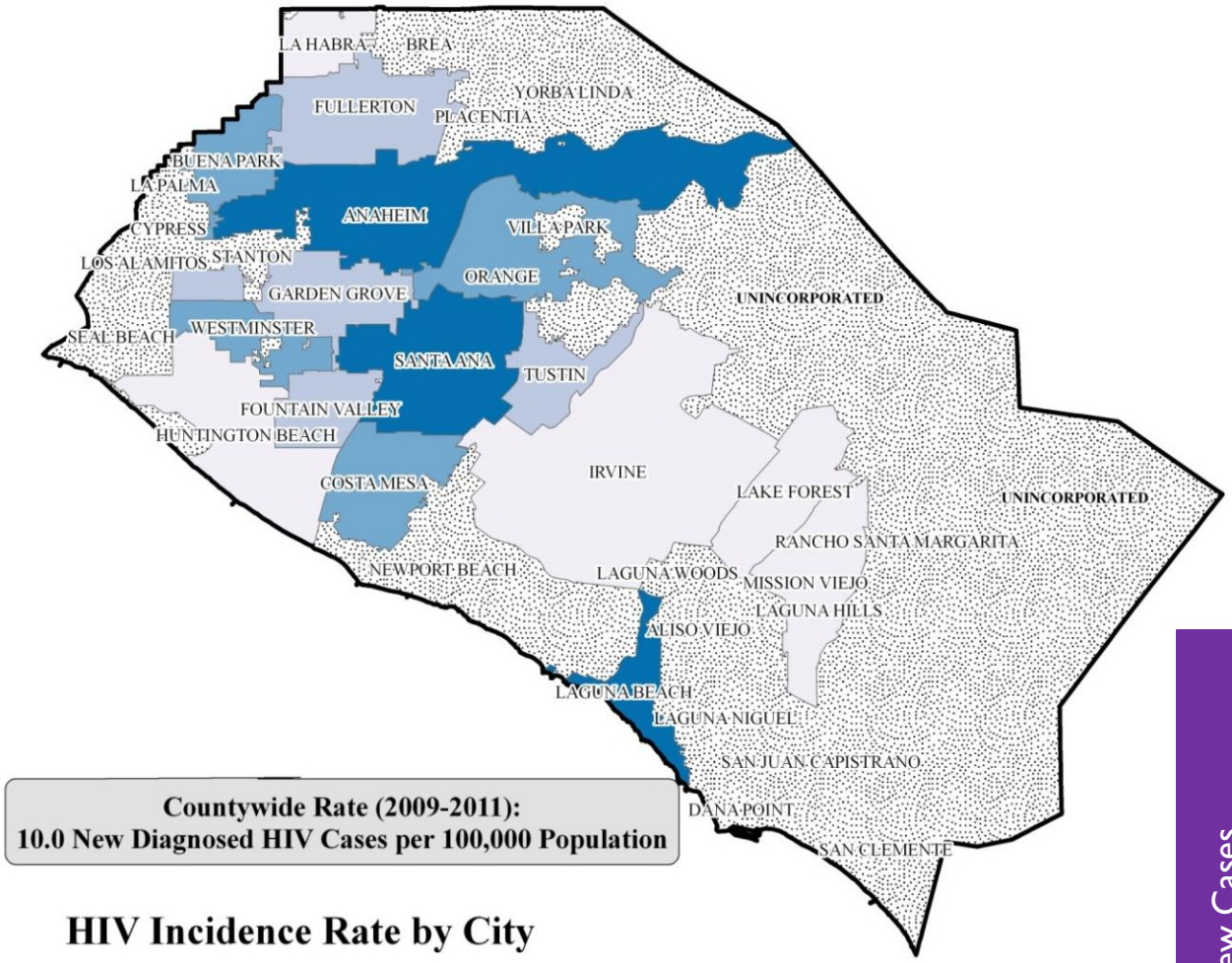
New HIV Cases by Age Group, Orange County, 2011



Source: OC HIV Case Registry; CA Office of AIDS Surveillance, CDC HIV Surveillance

City	New HIV Cases Per 100,000, 2009-2011 (Average)
Mission Viejo	5.4
Irvine	5.7
Lake Forest	6.9
Huntington Beach	7.2
La Habra	8.3
Fullerton	8.6
Orange County	10.0
Garden Grove	10.2
Tustin	10.2
Fountain Valley	10.3
Costa Mesa	10.9
Buena Park	11.2
Westminster	11.9
Orange	12.0
California (2011)	13.2
Anaheim	14.1
United States (2011)	15.8
Santa Ana	21.1
Laguna Beach	33.7
Aliso Viejo	Estimate unstable
Brea	Estimate unstable
Cypress	Estimate unstable
Dana Point	Estimate unstable
La Palma	Estimate unstable
Laguna Hills	Estimate unstable
Laguna Woods	Estimate unstable
Los Alamito	Estimate unstable
Newport Beach	Estimate unstable
Placentia	Estimate unstable
Rancho Santa Margarita	Estimate unstable
San Clemente	Estimate unstable
San Juan Capistrano	Estimate unstable
Stanton	Estimate unstable
Villa Park	Estimate unstable
Yorba Linda	Estimate unstable

Orange County HIV Incidence (2009-2011)
New Cases per 100,000 Population



Countywide Rate (2009-2011):
10.0 New Diagnosed HIV Cases per 100,000 Population

HIV Incidence Rate by City

- 5.4 - 8.3
- 8.4 - 10.3
- 10.4 - 12.0
- 12.1 - 33.7
- Data missing or unstable

Source: 2011, Epidemiology and Assessment, Orange County Health Care Agency

HIV – Living Cases

Impact: At the end of 2012, there were **6,876 people living with HIV** in Orange County (5,998 males, 831 females, and 47 transgender individuals).

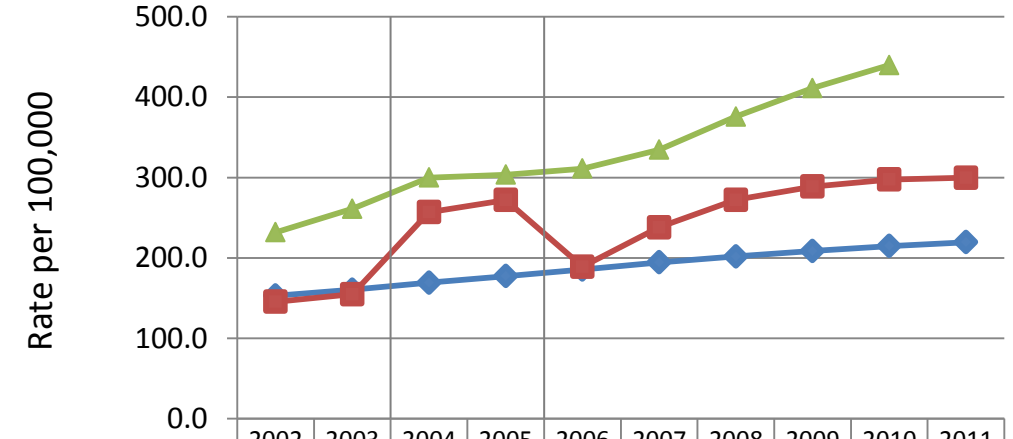
Description of Indicators: This indicator measures the rate of individuals living with HIV at year's end per 100,00 population as reported through the Orange County HIV Case Registry as of January 31, 2013.

Importance of Indicator: An estimated 21% of persons who have HIV do not know it [3], and more than 50% of those newly infected with HIV acquired the virus from this group [4]. Identifying those who are infected and getting them into treatment lowers the risk of transmission [5]. Although there is still no cure for HIV, effective treatment can reduce serious illness and death rates [6], but the lifetime cost of treatment is $355,000 per person [7].

Healthy People 2020 Goal: No comparable goal.

Technical Note: *California shifted from code-based to name-based HIV reporting in 2006, which resulted in lower reported numbers of people living with HIV in immediately subsequent years. U.S. estimates expanded from AIDS diagnoses to HIV/AIDS diagnoses in 2004.*

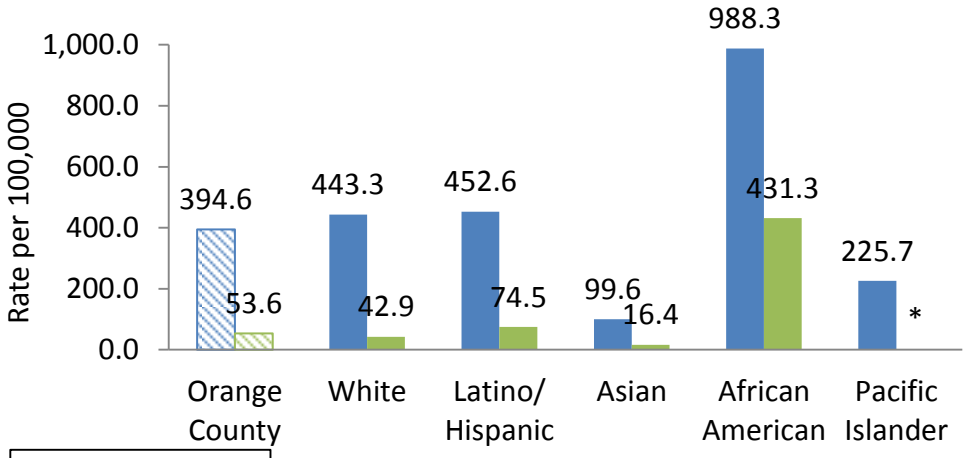
Living HIV Cases, 2002-2011



	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Orange County	153.2	160.6	169.2	177.3	185.6	194.5	201.8	208.6	214.7	219.6
CA	145.5	154.8	256.9	272.1	189.2	238.1	272.3	288.7	297.5	299.7
US	231.8	261.1	299.9	303.6	311.2	334.5	375.9	411.2	439.9	

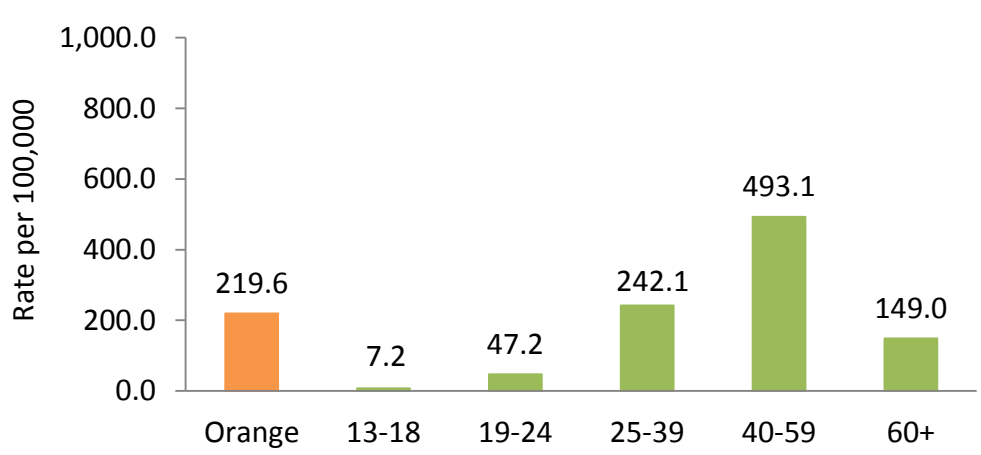
U.S. estimates expanded from AIDS diagnoses to HIV/AIDS diagnoses in 2004 . California shifted from code-based to name-based HIV reporting in 2006.

Living HIV Cases by Race/Ethnicity and Gender, Orange County, 2011



**Estimate unstable*

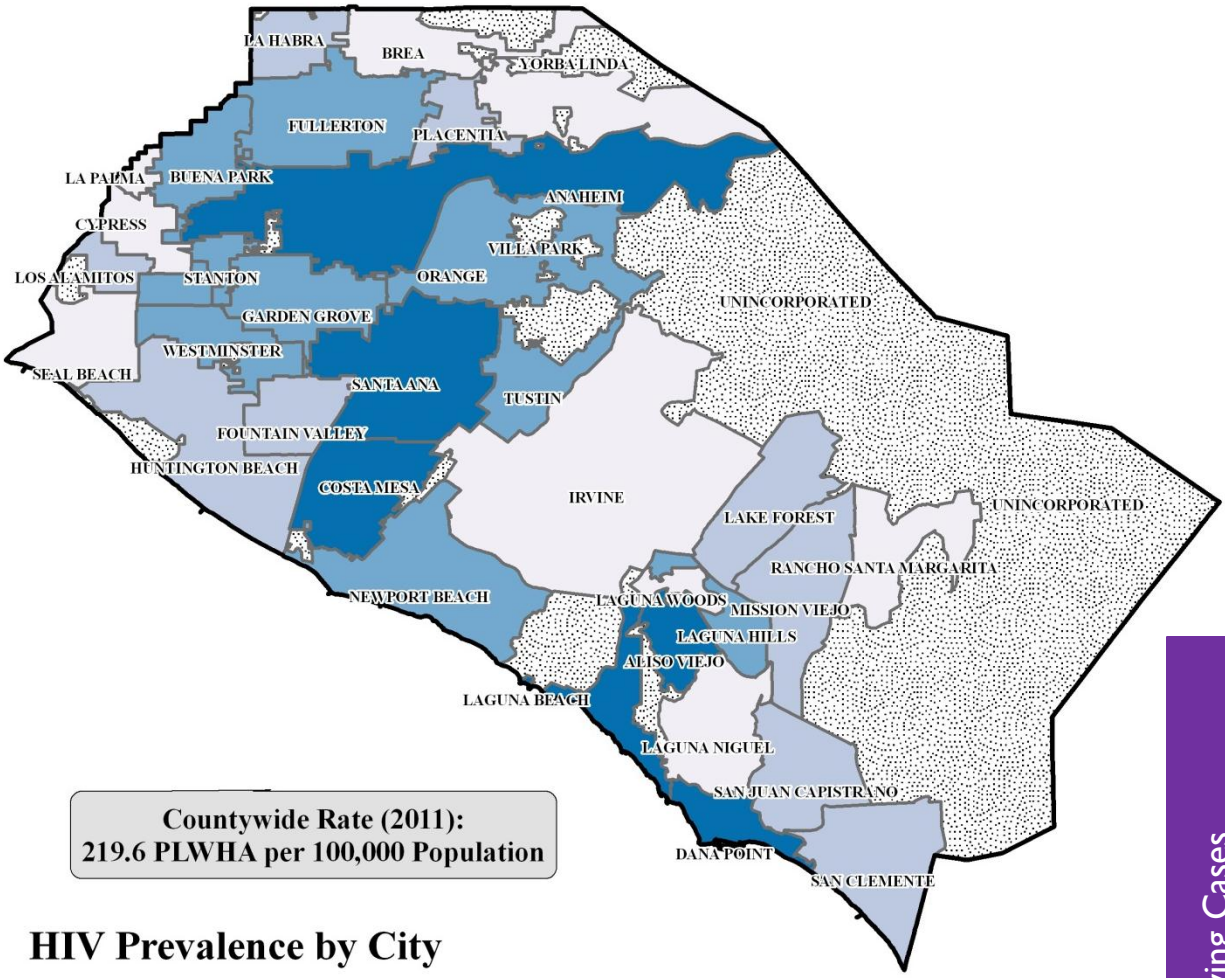
Living HIV Cases by Age Group, Orange County, 2011



Source: OC HIV Case Registry; CA Office of AIDS Surveillance, CDC HIV Surveillance

City	Persons Living with HIV per 100,000, 2011
Laguna Woods	30.8
La Palma	44.9
Yorba Linda	55.5
Rancho Santa Margarita	79.3
Cypress	102.3
Irvine	103.0
Brea	114.8
San Juan Capistrano	115.2
Lake Forest	130.4
Mission Viejo	131.6
La Habra	142.3
Placentia	150.0
Fountain Valley	153.4
Huntington Beach	162.3
Los Alamito	165.6
San Clemente	166.3
Newport Beach	183.9
Buena Park	186.8
Fullerton	190.5
Westminster	191.3
Orange	213.0
Garden Grove	213.1
Laguna Hills	217.1
Stanton	219.2
Orange County	219.6
Tustin	242.8
Aliso Viejo	250.5
Dana Point	263.3
Anaheim	273.9
Costa Mesa	285.4
California	300.9
Santa Ana	430.8
Laguna Beach	1,917.5
Villa Park	Estimate unstable

Orange County HIV Prevalence (2011)
People Living With HIV/AIDS per 100,000 Population



Countywide Rate (2011):
219.6 PLWHA per 100,000 Population

HIV Prevalence by City

- 0.0 - 114.8
- 114.9 - 166.3
- 166.4 - 242.8
- 242.9 - 1917.5
- Data missing or unstable

Source: 2011, Epidemiology and Assessment, Orange County Health Care Agency

Tuberculosis (TB)

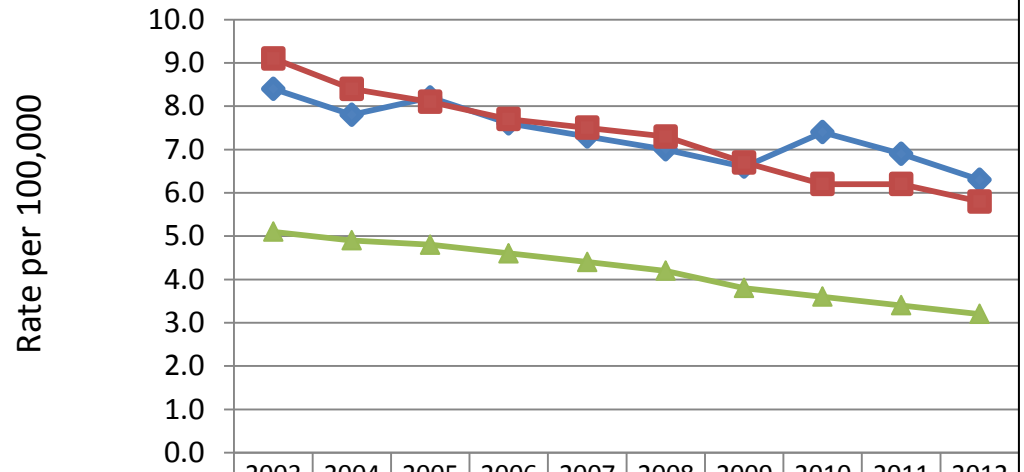
Impact: In 2012, there were **192 new cases** of Tuberculosis (TB) diagnosed (115 males and 77 females).

Description of Indicators: The indicator measures the rate of confirmed new TB disease cases per 100,00 population reported to Orange County Public Health on the Report of Verified Case of Tuberculosis (RVCT).

Importance of Indicator: *Mycobacterium tuberculosis,* the bacterium that causes TB, usually attacks the lungs, but can attack any part of the body such as the kidney, spine, and brain. If not treated properly, TB disease can be fatal [8]. Orange County had the 12th highest rate of TB disease in California in 2012 [9]. Although TB is curable, over 6% of the people diagnosed with TB disease in California die during treatment. Care of TB can be difficult and costly due to drug resistance and medical comorbidities associated with the disease [9].

Healthy People 2020 Goal: Reduce confirmed new cases of TB from 4.8 per 100,000 population in 2005 to 1.0 per 100,000.

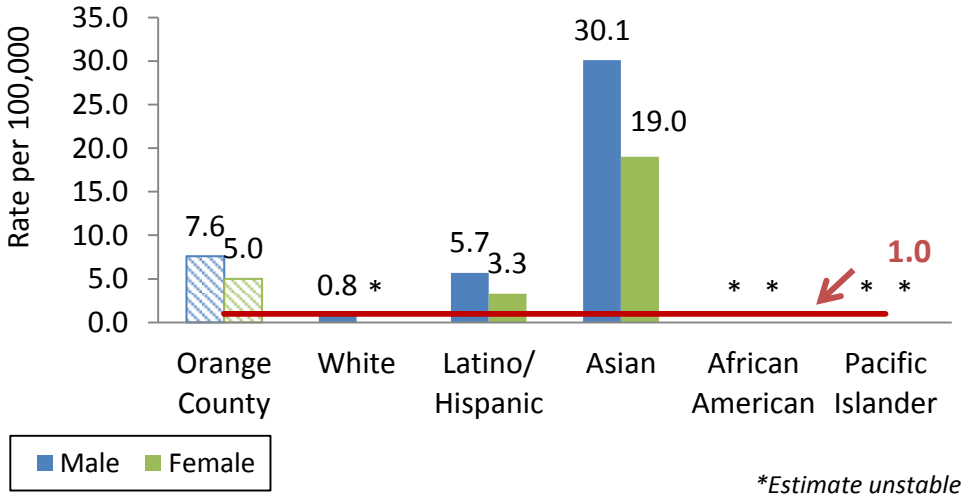
New TB Cases, 2003-2012



	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012
Orange County	8.4	7.8	8.2	7.6	7.3	7.0	6.6	7.4	6.9	6.3
CA	9.1	8.4	8.1	7.7	7.5	7.3	6.7	6.2	6.2	5.8
US	5.1	4.9	4.8	4.6	4.4	4.2	3.8	3.6	3.4	3.2

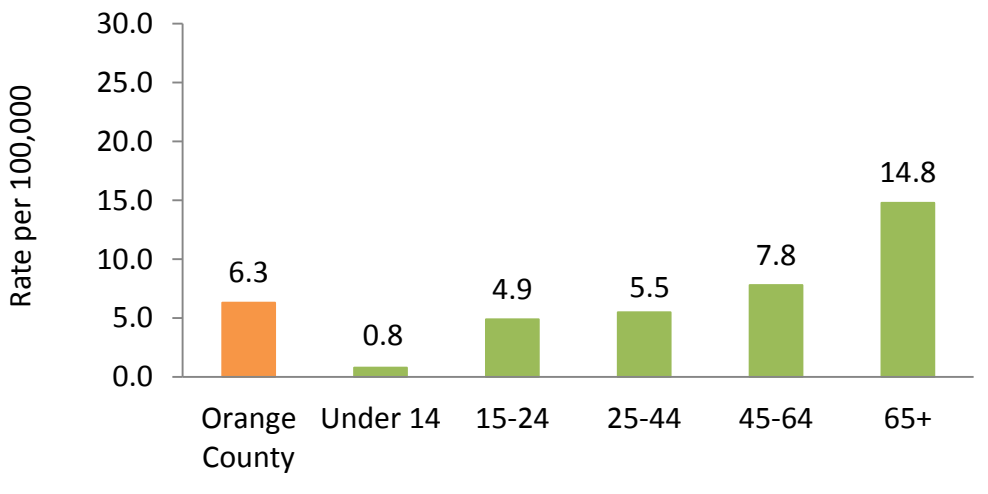
Indicates Healthy People 2020 Goal

New TB Cases by Race/Ethnicity and Gender, Orange County, 2012



**Estimate unstable*

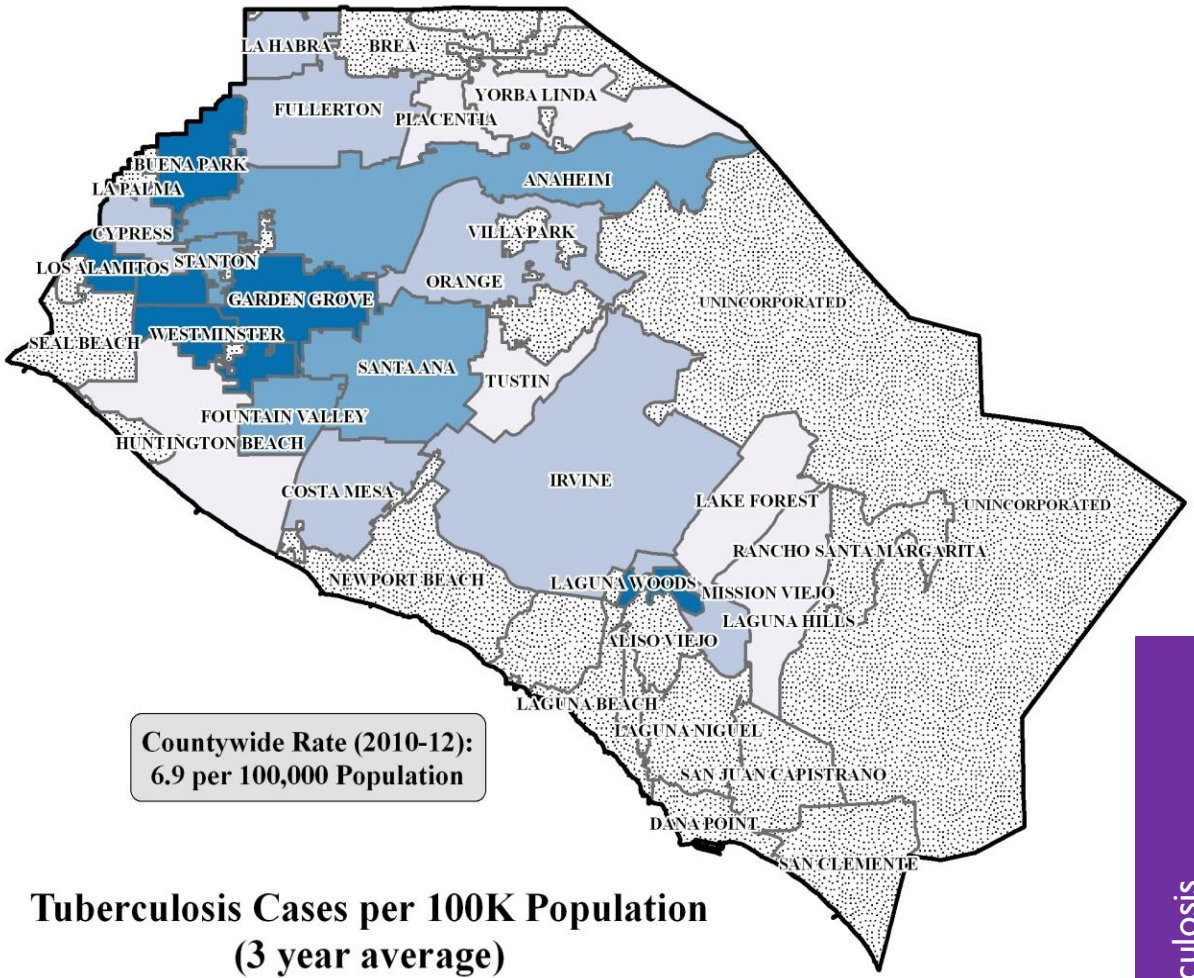
New TB Cases by Age Group, Orange County, 2012



Source: Report of Verified Case of TB (RVCT)

City	Tuberculosis Cases per 100,000, 2010-2012
United States	3.4
Irvine	5.2
Orange	5.6
California	6.1
Fullerton	6.4
Orange County	6.9
Anaheim	8.4
Santa Ana	11.3
Fountain Valley	11.4
Buena Park	12.0
Garden Grove	19.7
Westminster	20.1
Aliso Viejo	Estimate unstable
Brea	Estimate unstable
Costa Mesa	Estimate unstable
Cypress	Estimate unstable
Dana Point	Estimate unstable
Huntington Beach	Estimate unstable
La Habra	Estimate unstable
La Palma	Estimate unstable
Laguna Beach	Estimate unstable
Laguna Hills	Estimate unstable
Laguna Woods	Estimate unstable
Lake Forest	Estimate unstable
Los Alamito	Estimate unstable
Mission Viejo	Estimate unstable
Newport Beach	Estimate unstable
Placentia	Estimate unstable
Rancho Santa Margarita	Estimate unstable
San Clemente	Estimate unstable
San Juan Capistrano	Estimate unstable
Stanton	Estimate unstable
Tustin	Estimate unstable
Villa Park	Estimate unstable
Yorba Linda	Estimate unstable

Orange County Tuberculosis Incidence (2010-2012)
New Cases per 100,000 Population



Tuberculosis Cases per 100K Population (3 year average)

- 2.3 - 4.0
- 4.1 - 6.9
- 7.0 - 11.5
- 11.6 - 19.6
- OC City Boundaries
- Data missing or unstable

Source: Orange County Health Care Agency; California Department of Finance

References

Chlamydia

1. U.S. Preventive Services Task Force. Screening for chlamydial infection: U.S. Preventive Services Task Force Recommendation Statement. Ann Intern Med 2007;147:128-33.
2. Rottingen JA, et al. A systematic review of the epidemiologic interactions between classic sexually transmitted diseases and HIV: how much really is known? Sex Transm Dis. 2001;28:579-97.

HIV – New and Living Cases

3. Campsmith ML, et al. Undiagnosed HIV prevalence among adults and adolescents in the United States at the end of 2006. J Acquir Immune Defic Syndr 2010;53:619-24.
4. Marks G, et al. Estimating sexual transmission of HIV from persons aware and unaware that they are infected with the virus in the USA. AIDS 2006;20:144750.
5. Metsch LR, et al. HIV transmission risk behaviors among HIV infected persons who are successfully linked to care. Clin Infect Dis 2008;47:577-84.
6. Lee LM, et al. Survival after AIDS diagnosis in adolescents and adults during the treatment era, United States, 1984-1997. JAMA 2001;285:1308-15.
7. Schaackman BR, Gebo KA, Walensky RP, et al. The lifetime cost of current human immunodeficiency virus care in the United States. *Med Care* 2006;44(11)990-97

Tuberculosis

8. Centers for Disease Control and Prevention. Tuberculosis (TB), Basic TB Facts. Accessed 8/13. Available at: http://www.cdc.gov/tb/topic/basics/default.htm.
9. Tuberculosis Control Branch, Report on Tuberculosis in California 2012. California Department of Public Health, Richmond, CA. July 2013.

Health Behaviors

Related Health Behaviors Indicators in Other Chapters

Adult Physical Inactivity

Impact: In 2010, **21.1% of adults** in Orange County reported no leisure-time physical activity.

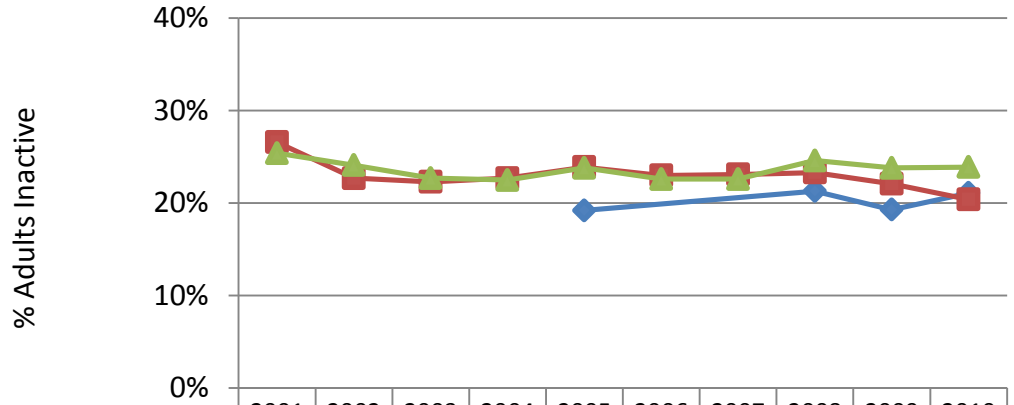
Description of Indicator: Proportion of adults reporting having engaged in no leisure-time physical activity over the past 30 days, through the Behavioral Risk Factor Surveillance Survey.

Importance of Indicator: Physical activity is a key factor in weight loss, maintaining a healthy weight, and preventing obesity - the 2nd leading behavioral contributor to death in the United States [1]. Those who are physically active tend to live longer and are at reduced risk for cardiovascular diseases, certain cancers, diabetes, depression, and a number of other significant health problems [2].

Healthy People 2020 Goal: Not comparable with data shown.

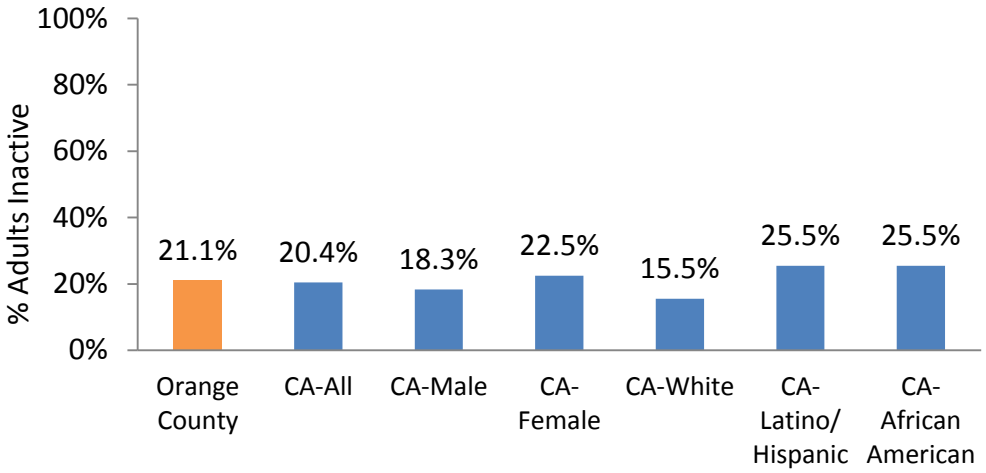
Technical Notes: *California rates shown for comparison of race/ethnicity and age-group because Orange County estimates were unstable. Orange County data not available annually until 2008. U.S. data is based on state median. Sub-county geographic detail is not available.*

Adult Physical Inactivity, 2001-2010

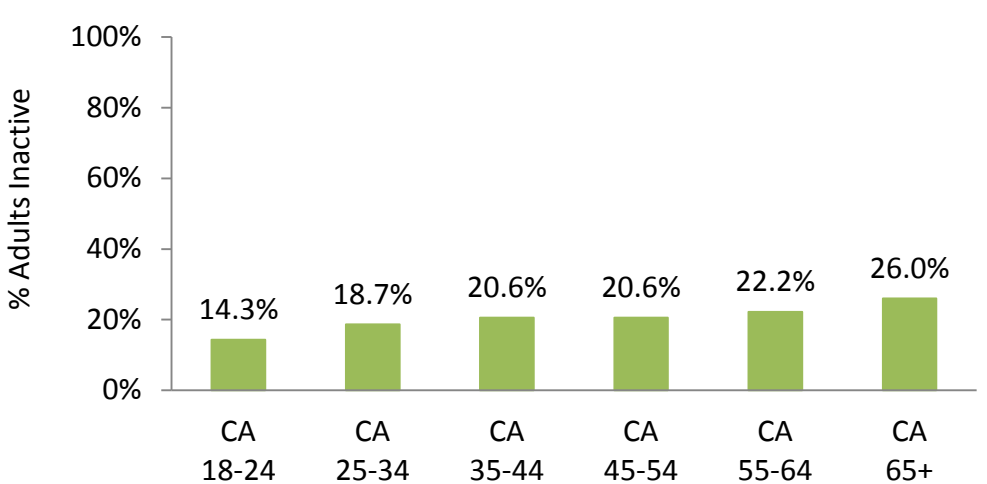


	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County					19.2%			21.3%	19.3%	21.1%
CA	26.6%	22.7%	22.3%	22.7%	23.9%	23.0%	23.1%	23.3%	22.1%	20.4%
US	25.4%	24.1%	22.7%	22.5%	23.8%	22.6%	22.6%	24.6%	23.8%	23.9%

Adult Physical Inactivity by Race/Ethnicity, California, 2010



Adult Physical Inactivity by Age Group, California, 2010



Source: Behavioral Risk Factor Surveillance System

Adult Fruit and Vegetable Intake

Impact: In 2009, **27.4% of adults** in Orange County reported eating 5 or more fruits and vegetables a day.

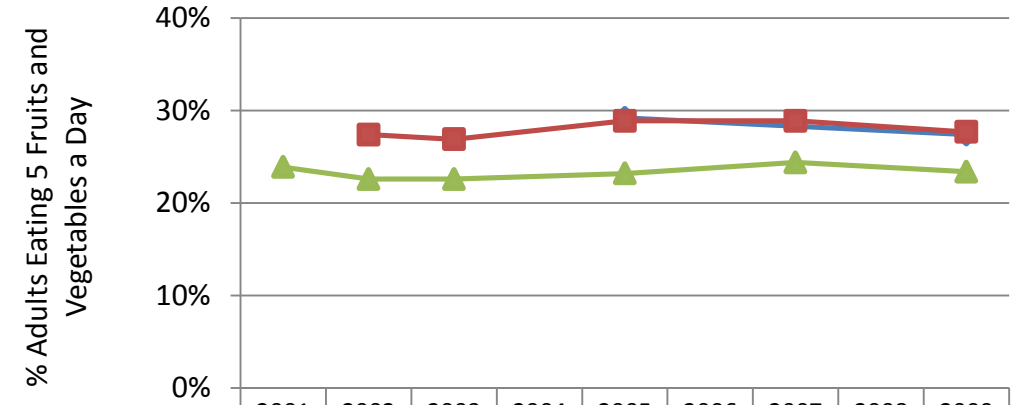
Description of Indicator: Proportion of adults reporting having consumed 5 or more fruits and vegetables per day, through the Behavioral Risk Factor Surveillance Survey.

Importance of Indicator: Healthy eating is a major way one can attain or maintain a healthy weight and preventing obesity [3], the 2nd leading behavioral contributor to death in the United States [4]. Those who maintain a healthy diet are less likely to suffer from heart disease, high blood pressure, diabetes, some types of cancers, and osteoporosis [5].

Healthy People 2020 Goal [LHI]: Not comparable with data shown.

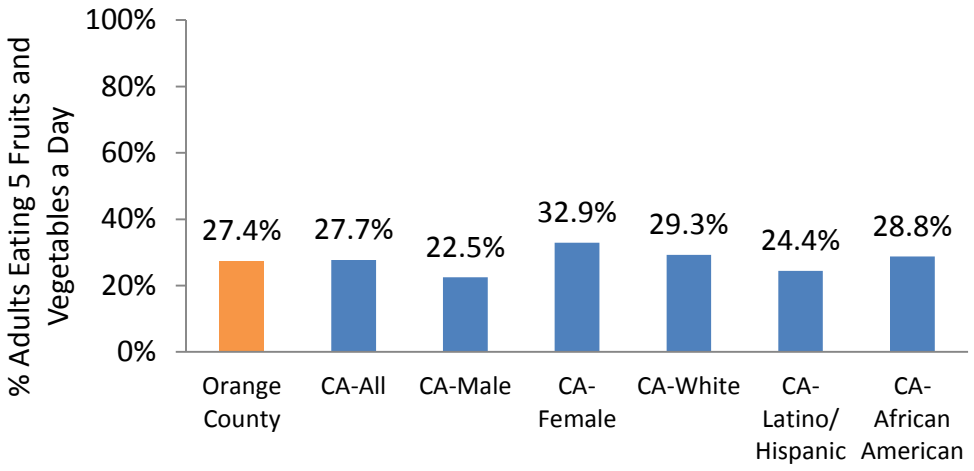
Technical Notes: *California rates shown for comparison of race/ethnicity and age-group because Orange County estimates were unstable. Orange County data not available annually until 2008. U.S. data is based on state median. Sub-county geographic detail is not available.*

Adult Fruit and Vegetable Intake, 2001-2009

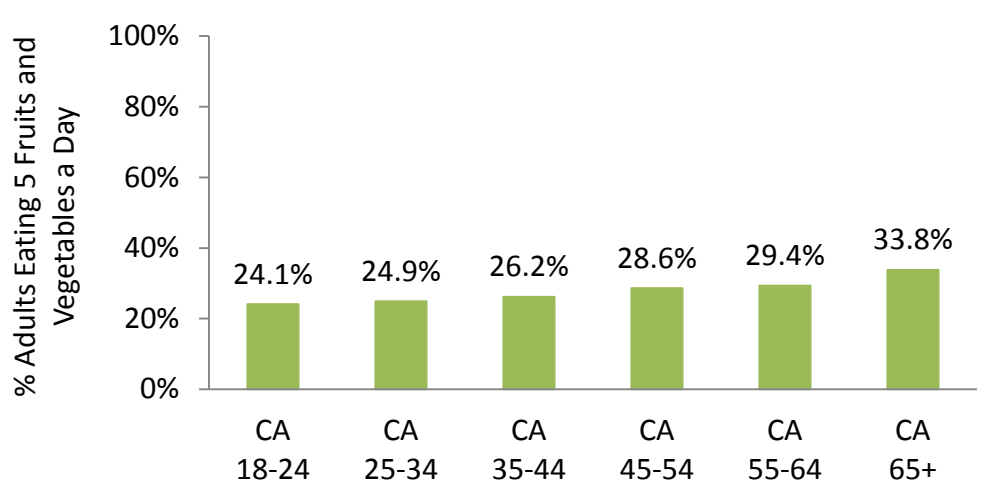


	2001	2002	2003	2004	2005	2006	2007	2008	2009
Orange County					29.2%				27.4%
CA		27.4%	26.9%		28.9%		28.9%		27.7%
US	23.9%	22.6%	22.6%		23.2%		24.4%		23.4%

Adult Fruit and Vegetable Intake by Race/Ethnicity, California, 2009



Adult Fruit and Vegetable Intake by Age Group, California, 2009



Source: Behavioral Risk Factor Surveillance System

Adult Smoking

Impact: In 2011-12, **12.0% of adults** (15.5% of males and 8.6% of females) in Orange County report currently smoking.

Description of Indicator: Proportion of adults who currently smoke as reported through the California Health Interview Survey (CHIS).

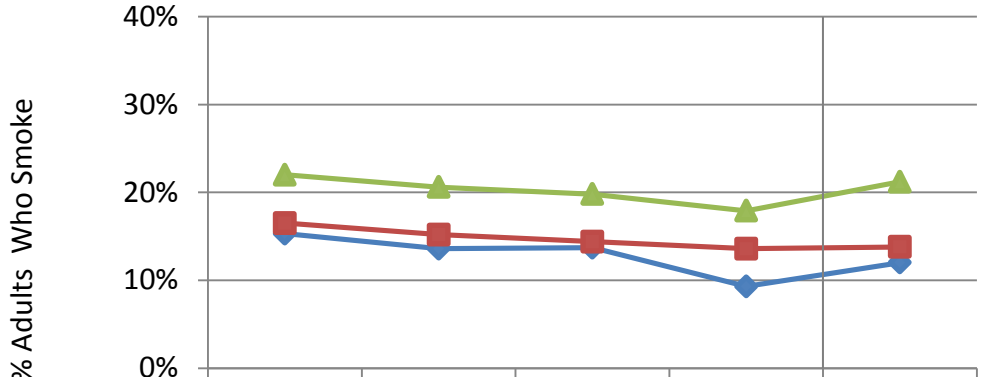
Importance of Indicator: Tobacco use is the single greatest behavioral contributor to death in the United States [6,7], increasing risk of death from lung, esophageal, and pancreatic cancers, cardiovascular diseases, bronchitis, pneumonia, emphysema and other diseases [7].

Healthy People 2020 Goal [LHI]: Reduce the percent of adults who are current cigarette smokers from 20.6% in 2008 to 12.0%.

Technical Notes: *Data is not robust enough to show race/ethnicity by gender. In 2011, CHIS began continuous data collection with two-year reporting cycles. Orange County and California estimates are for 2011-12 while United States estimates are reported from the Behavioral Risk Factor Surveillance System for 2011 only. Data after 2009 are not directly comparable to previous years due to changes in methodology. Sub-county geographic detail is not available.*

Indicates Healthy People 2020 Goal

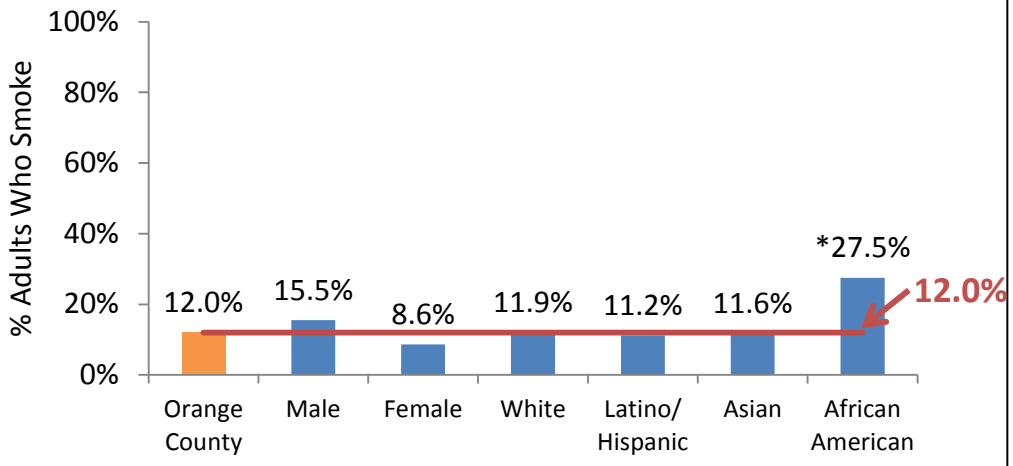
Adult Smoking, 2003 – 2011-12*



	2003	2005	2007	2009	2011-12*
Orange County	15.3%	13.6%	13.7%	9.3%	12.0%
CA	16.5%	15.2%	14.4%	13.6%	13.8%
US	22.0%	20.6%	19.8%	17.9%	21.2%

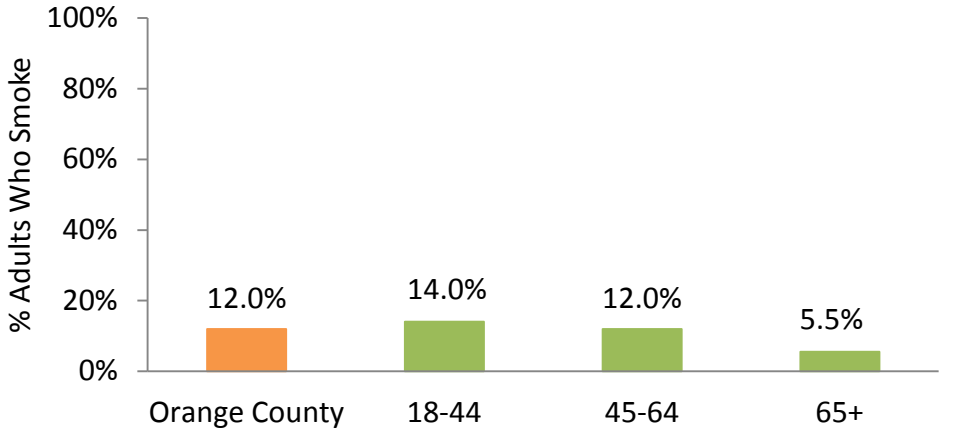
** Orange County and California estimates are for 2011-12 while United States estimates are for 2011 only. Data prior to 2011 not comparable.*

Adult Smoking by Gender and by Race/Ethnicity, Orange County, 2011-12



**Estimate unstable*

Adult Smoking by Age Group, Orange County, 2011-12



Source: California Health Interview Survey; Behavioral Risk Factor Surveillance Survey

Adult Binge Drinking

Impact: In 2010, **14.9% of adults** in Orange County reported binge drinking in the past month.

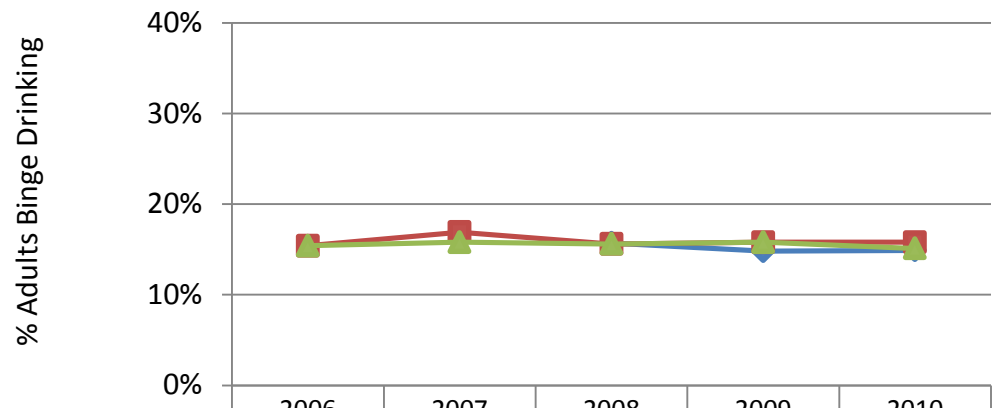
Description of Indicator: Proportion of adults who reported consuming 5 or more drinks for males or 4 or more for females in a single occasion in the past month as reported through the Behavioral Risk Factor Surveillance System.

Importance of Indicator: Alcohol consumption is the 3rd leading behavioral contributor to death in the United States [8]. Acute alcohol abuse increases risks of injury, violence, poor birth outcomes, and alcohol poisoning, while chronic alcohol abuse increases risk of heart disease, stroke, and liver disease [9].

Healthy People 2020 Goal [LHI]: Not comparable with data shown.

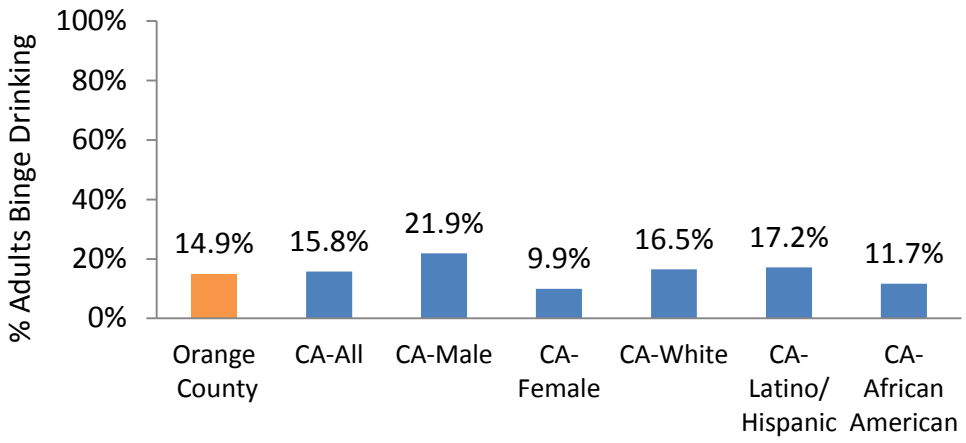
Technical Note: *California rates shown for comparison of race/ethnicity and age-group shown because Orange County estimates were unstable. Sub-county geographic detail is not available.*

Adult Binge Drinking, 2006-2010

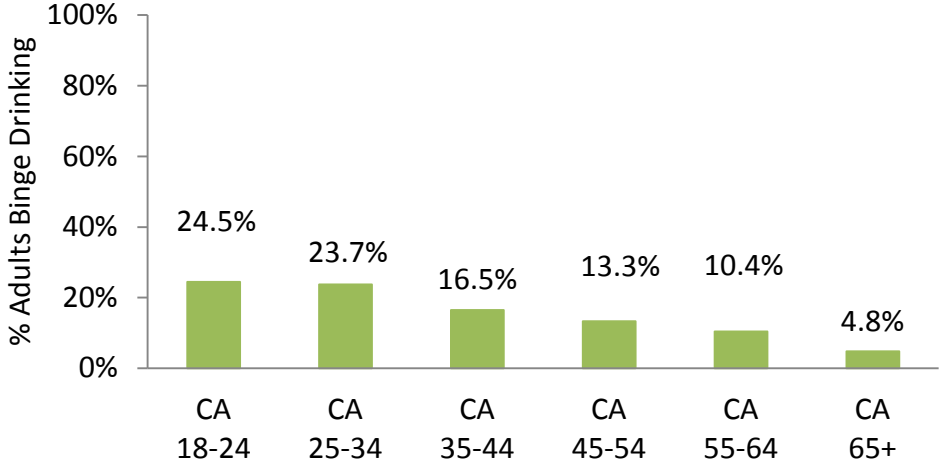


	2006	2007	2008	2009	2010
Orange County			15.7%	14.8%	14.9%
CA	15.4%	16.9%	15.6%	15.8%	15.8%
US	15.4%	15.8%	15.6%	15.8%	15.1%

Adult Binge Drinking by Gender and by Race/Ethnicity, California, 2010



Adult Binge Drinking by Age Group, California, 2010



Source: Behavioral Risk Factor Surveillance System

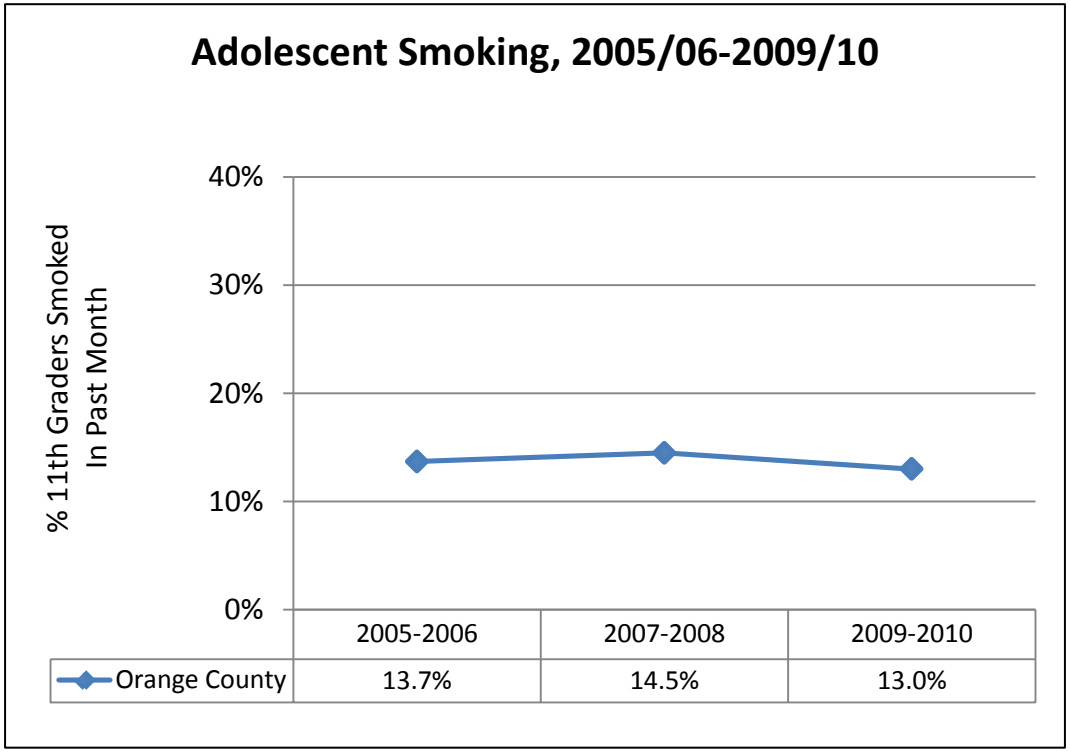
Adolescent Smoking

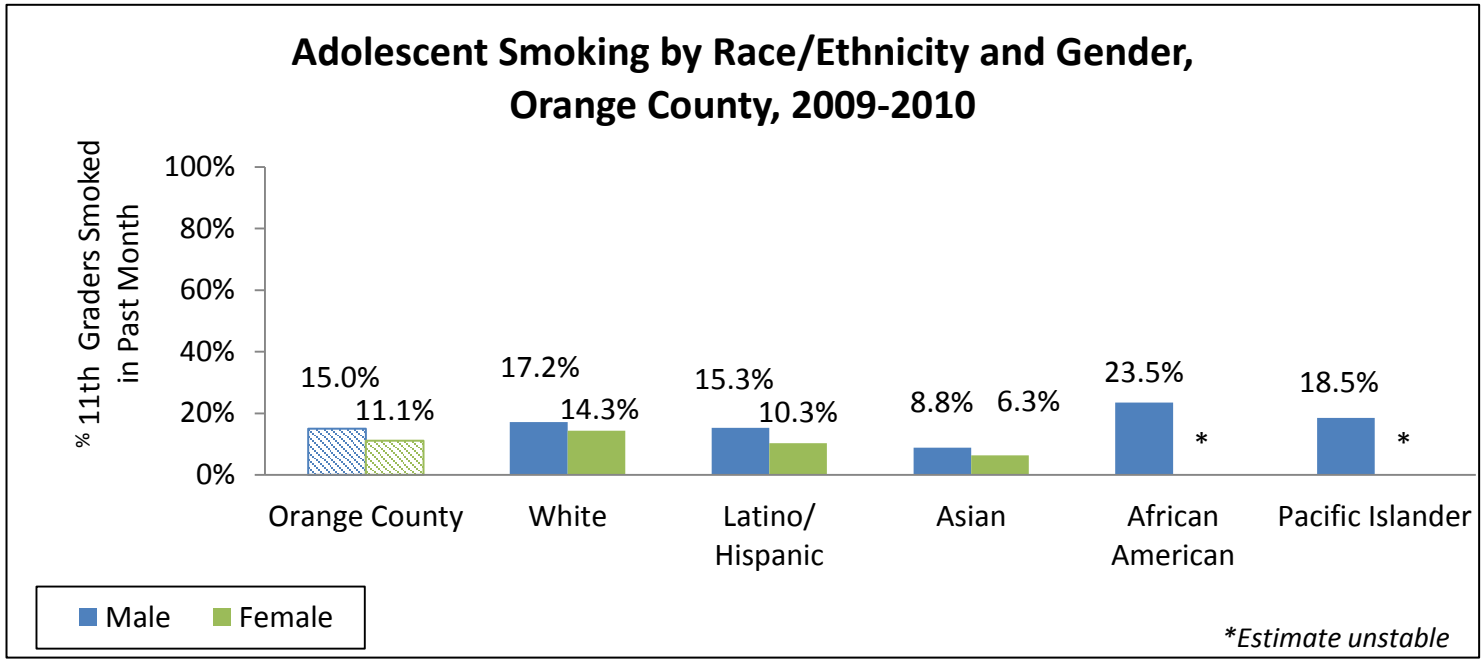
Impact: In 2009/10, **13.0% of 11th graders** (15.0% of males and 11.1% of females) in Orange County report smoking in the past month.

Description of Indicator: Proportion of 11th graders who report having smoked a cigarette in the past 30 days as reported through the California Healthy Kids Survey.

Importance of Indicator: Tobacco use is the single greatest behavioral contributor to death in the United States [10]. The vast majority of adult tobacco users - over 80% - started smoking before the age of 18. The developing adolescent brain is particularly prone to nicotine addiction, resulting in higher levels of addiction that can be caused by lower levels of tobacco exposure [11].

Healthy People 2020 Goal [LHI]: Not comparable with data shown.



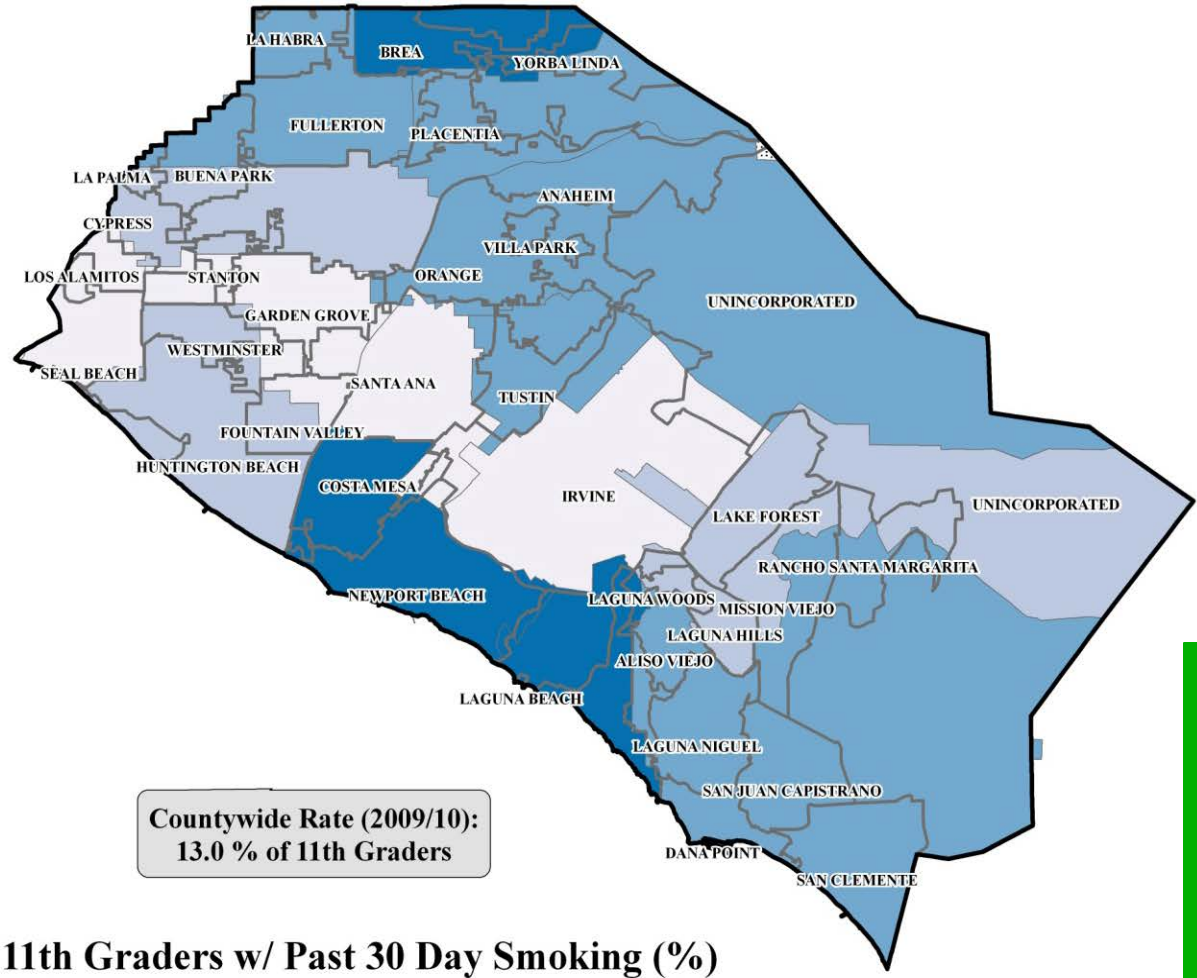


Comparison by Age Group not applicable.

Source: California Healthy Kids Survey

School District	11th Graders Who Smoked a Cigarette in the Past Month, 2009-2010
Santa Ana Unified	9.0%
Irvine Unified	10.2%
Garden Grove Unified	10.3%
Los Alamitos Unified	12.1%
Saddleback Valley Unified	12.5%
Anaheim Union High	12.5%
Huntington Beach Union High	12.8%
Orange County	13.0%
Fullerton Joint Union High	13.2%
Placentia-Yorba Linda Unified	13.8%
Tustin Unified	14.1%
Orange Unified	14.8%
Capistrano Unified	17.4%
Brea-Olinda Unified	17.7%
Newport-Mesa Unified	20.1%
Laguna Beach Unified	23.8%

Orange County Adolescent Smoking Prevalence (2009/10)
Percent of 11th Graders Reporting Past 30 Day Use



Source: 2009/10, California Healthy Kids Survey

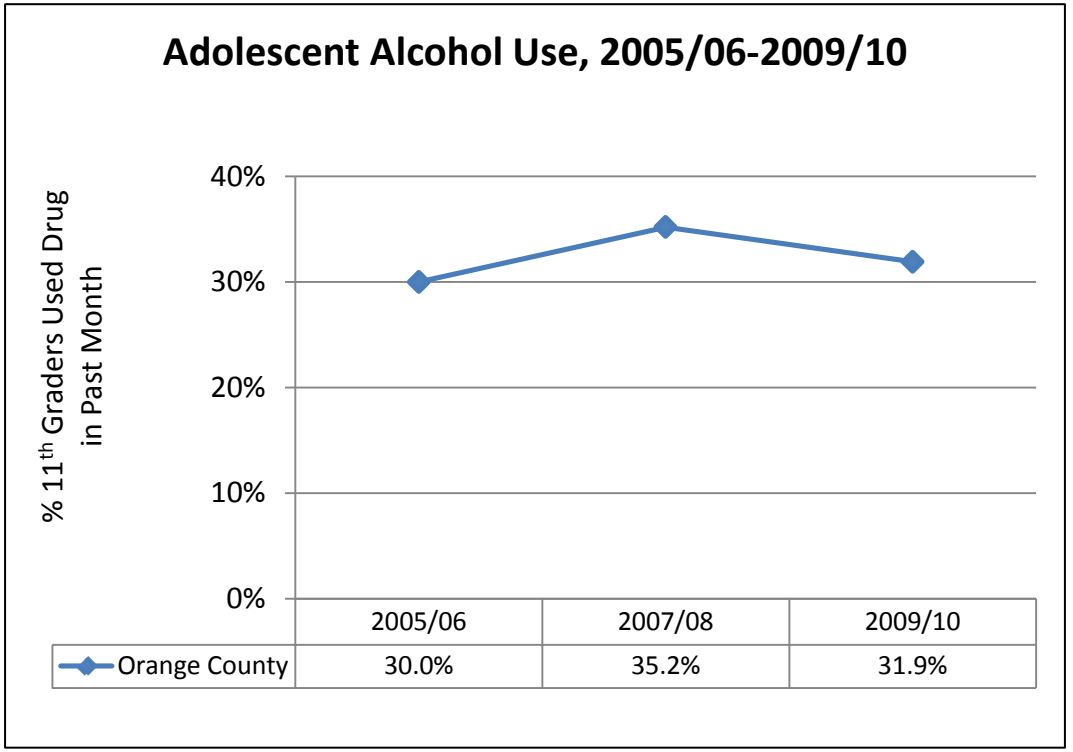
Adolescent Alcohol Use

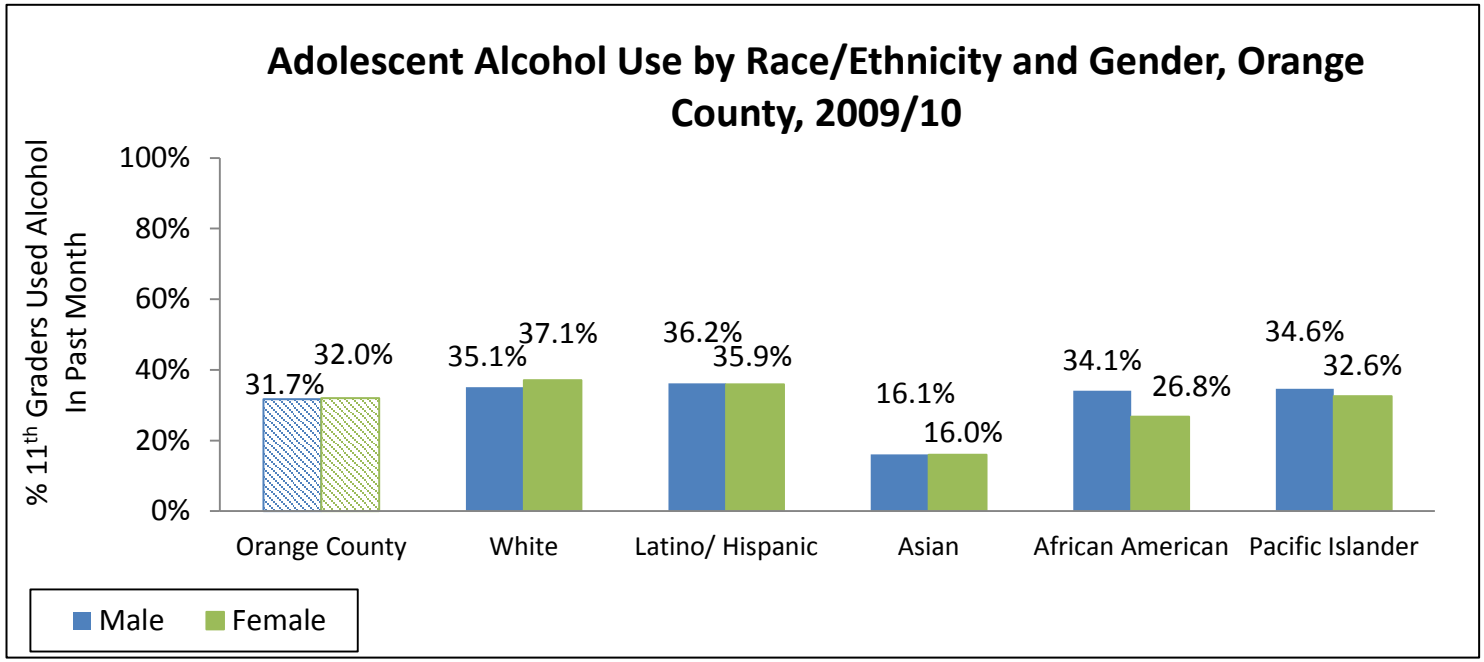
Impact: In 2010, **31.9 of 11th graders** (31.7% of males and 32.0% of females) in Orange County reported using alcohol in the past month.

Description of Indicator: Proportion of 11th graders who report having used alcohol in the past 30 days as reported through the California Healthy Kids Survey.

Importance of Indicator: Alcohol consumption is the 3rd leading behavioral contributor to death in the United States [12]. Adolescents who use alcohol at an early age are at increased risk of lifetime alcohol dependence and alcohol abuse, greater sexual risk-taking, academic difficulties, and abuse of other drugs [13].

Healthy People 2020 Goal [LHI]: Not comparable with data shown.



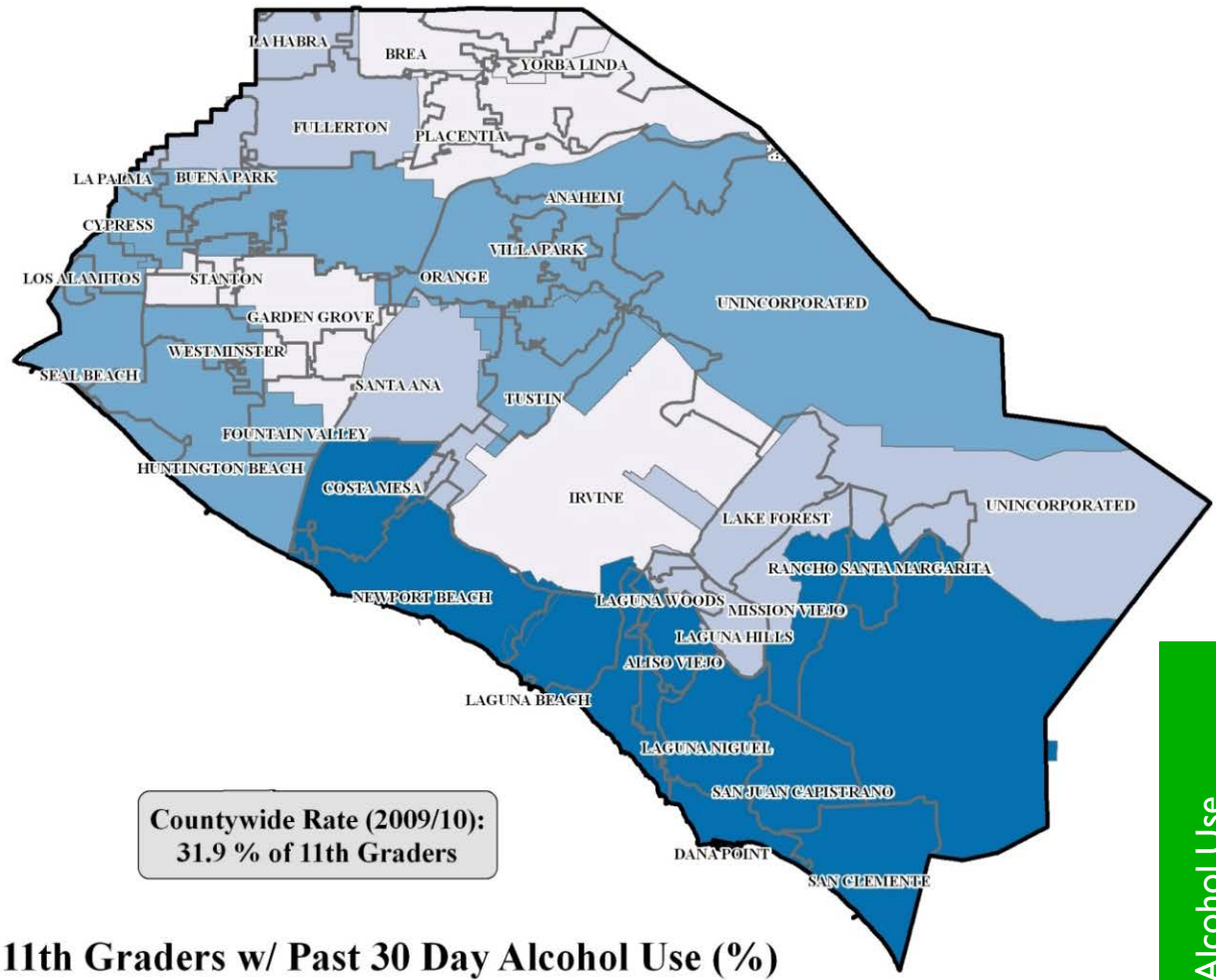


Comparison by Age Group not applicable.

Source: California Healthy Kids Survey

School District	Adolescent Alcohol Use, 2009/10
Irvine Unified	21.6%
Garden Grove Unified	26.4%
Brea-Olinda Unified	26.7%
Placentia-Yorba Linda Unified	27.6%
Santa Ana Unified	28.5%
Saddleback Valley Unified	29.1%
Fullerton Joint Union High	31.2%
Orange County	31.9%
Los Alamitos Unified	32.1%
Tustin Unified	33.9%
Orange Unified	34.1%
Anaheim Union High	34.3%
Huntington Beach Union High	34.8%
Capistrano Unified	37.2%
Laguna Beach Unified	47.7%
Newport-Mesa Unified	50.4%

Orange County Adolescent Alcohol Use (2009/10)
Percent of 11th Graders Reporting Past 30 Day Use



11th Graders w/ Past 30 Day Alcohol Use (%)

- 21.6 - 27.6
- 27.7 - 31.9
- 32.0 - 34.8
- 34.9 - 50.4
- Data missing or unstable
- OC City Boundaries

Source: 2009/10, California Healthy Kids Survey

Adolescent Drug Use

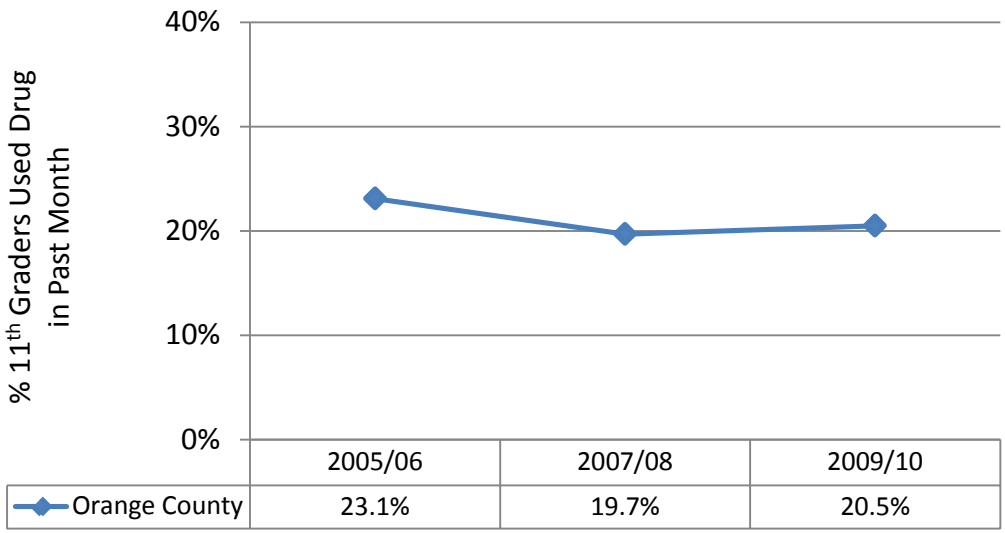
Impact: In 2010, **20.5% of 11th graders** (23.7% of males and 17.4% of females) in Orange County reported using drugs in the past month.

Description of Indicator: Proportion of 11th graders who report having used illicit drugs in the past 30 days as reported through the California Healthy Kids Survey.

Importance of Indicator: Illicit drug use is the 9th leading behavioral contributor to death in the United States [14]. Chronic drug users are more likely to commit crimes, become incarcerated, die in motor vehicle collisions, and become infected with HIV or other sexually transmitted pathogens [15].

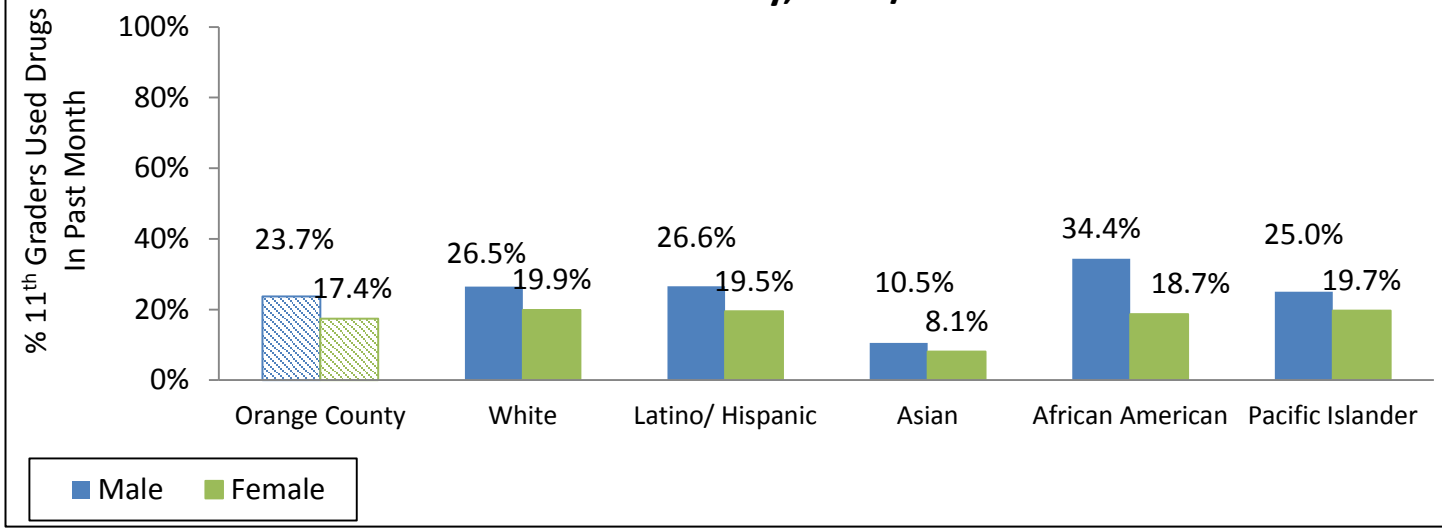
Healthy People 2020 Goal [LHI]: Not comparable with data shown.

Adolescent Drug Use, 2005/06-2009/10



	2005/06	2007/08	2009/10
Orange County	23.1%	19.7%	20.5%

Adolescent Drug Use by Race/Ethnicity and Gender, Orange County, 2009/10

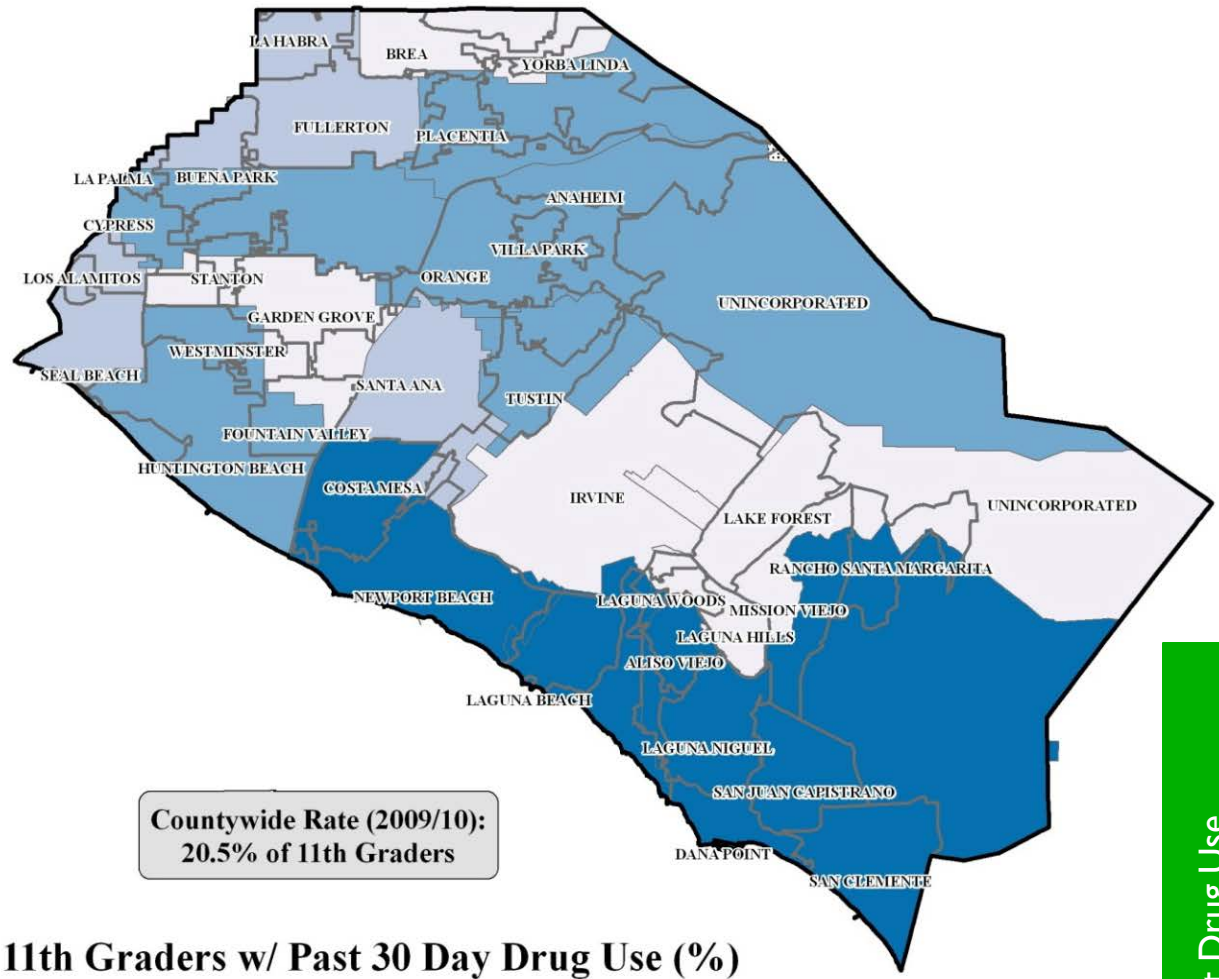


Comparison by Age Group not applicable.

Source: California Healthy Kids Survey

School District	Adolescent Drug Use, 2009/10
Irvine Unified	13.6%
Saddleback Valley Unified	17.6%
Brea-Olinda Unified	17.8%
Garden Grove Unified	18.0%
Santa Ana Unified	18.4%
Fullerton Joint Union High	19.1%
Los Alamitos Unified	19.3%
Orange County	20.5%
Placentia-Yorba Linda Unified	20.6%
Huntington Beach Union High	20.8%
Tustin Unified	22.9%
Anaheim Union High	23.0%
Orange Unified	23.1%
Capistrano Unified	25.0%
Newport-Mesa Unified	27.6%
Laguna Beach Unified	29.8%

Orange County Adolescent Drug Use (2009/10)
Percent of 11th Graders Reporting Past 30 Day Use



Source: 2009/10, California Healthy Kids Survey

Drug-Induced Deaths

Impact: In 2010, **311 deaths** (205 among males and 106 among females) in Orange County were drug-induced, accounting for 1.8% of deaths in the county.

Description of Indicator: Number of drug-induced deaths per 100,000 population based on the Orange County Master Death File. Rates by race/ethnicity are crude.

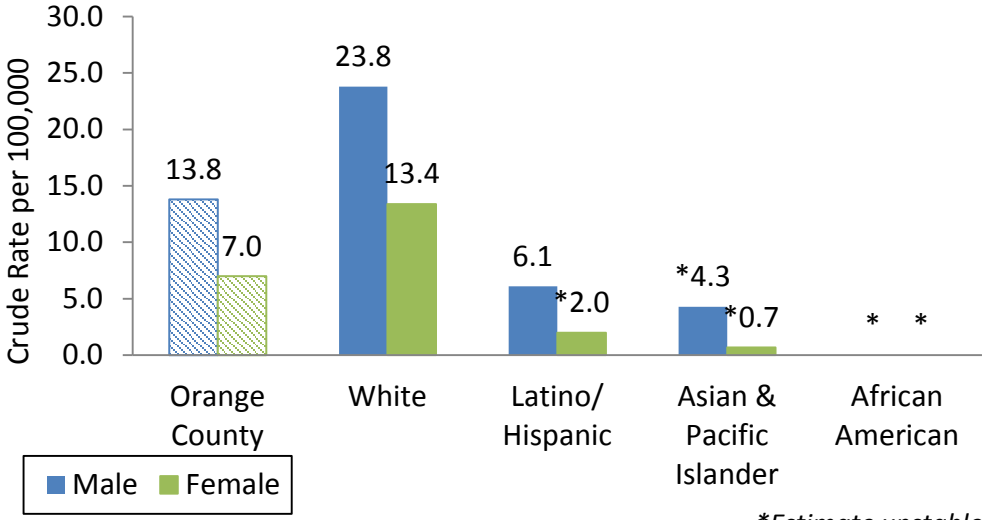
Importance of Indicator: Drug abuse is the 9th behavioral contributor to death in the United States [16]. In addition to overdose, drug use is associated with increased risks of infections with STDs and tuberculosis and, through injection drug use, HIV and hepatitis, while increasing risk of teenage pregnancy, domestic violence, child abuse, suicide, motor vehicle crashes, and various types of crime [17].

Healthy People 2020 Goal: Not comparable with data shown.

Technical Notes: *Sub-county geographic detail is not shown due to unstable estimates based on small numbers.*

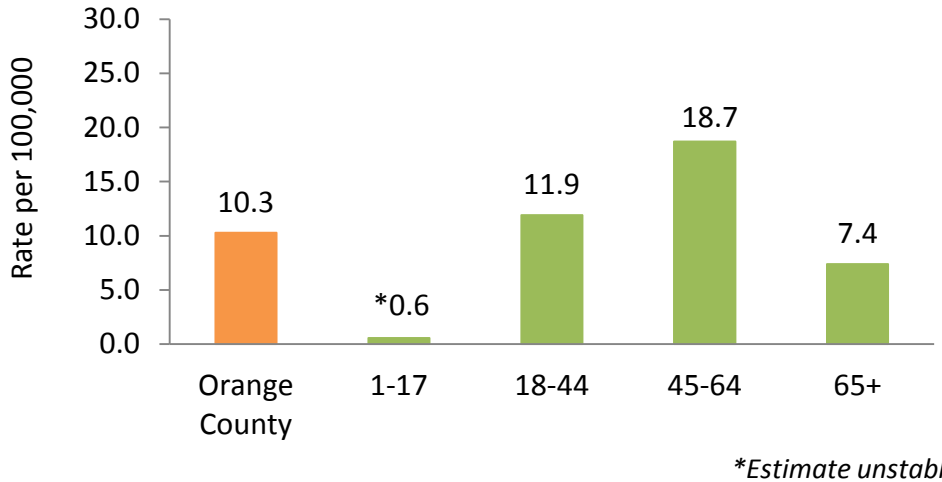
Ten-Year trends not available.

Drug-Induced Deaths by Race/Ethnicity and Gender, Orange County, 2010



*Estimate unstable

Drug-Induced Deaths by Age Group, Orange County, 2010



*Estimate unstable

Source: Orange County Master Death File

References

Adult Physical Inactivity

1. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA 2004;291:1238-1245. Correction JAMA 2005; 293(3):298.
2. Jakicic JM and Otto AD. Physical activity considerations for the treatment and prevention of obesity. Am J Clin Nutr 2005; 82(S):226S–229S.

Adult Fruit and Vegetable Intake

3. Chan RSM and Woo J. Prevention of Overweight and Obesity: How Effective is the Current Public Health Approach. Int. J. Environ. Res. Public Health 2010;7:765-783.
4. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA 2004;291:1238-1245. Correction JAMA 2005; 293(3):298.
5. U.S. Department of Health and Human Services (US DHHS) and U.S. Department of Agriculture (USDA). Dietary guidelines for Americans, 2010. 7th ed. Washington: U.S. Government Printing Office, December 2010.

Adult Smoking

6. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA. 2004;291(10):1238-1245.
7. U.S. Department of Health and Human Services. How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2010.

Adult Binge Drinking

8. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA 2004; 291(10):1238-1245.
9. U.S. Department of Health and Human Services. Alcohol and Health. Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Institute on Alcohol Abuse and Alcoholism, 2000.

Adolescent Smoking

10. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA. 2004;291(10):1238-1245.
11. U.S. Department of Health and Human Services. Preventing Tobacco Use Among Youth and Young Adults: A Report of the Surgeon General. Atlanta, GA: U.S. Department of Health and Human Services, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office on Smoking and Health, 2012.

Adolescent Alcohol Use

12. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA. 2004;291(10):1238-1245.
13. American Academy of Pediatrics (AAP). Policy Statement – Alcohol use by youth and adolescents: A pediatric concern. Pediatrics 2010;125:1078-1087.

References

Adolescent Drug Use

14. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA. 2004;291(10):1238-1245.
15. National Prevention Council, National Prevention Strategy, Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General, 2011.

Drug-Induced Deaths

17. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA. 2004;291(10):1238-1245.
18. National Prevention Council, National Prevention Strategy, Washington, DC: U.S. Department of Health and Human Services, Office of the Surgeon General, 2011.

Injuries and Accidents

Related Injuries and Accidents Indicators in Other Chapters

Crime and Public Safety

Mental Health

This page intentionally left blank.

Leading Causes of Injury Deaths, 2010

Orange County's Leading Causes of Injury Death	Number of Deaths
1. Suicide	279
2. Accidental poisoning and exposure to noxious substances [UI]	253
3. Falls [UI]	148
4. Motor vehicle accidents [UI]	125
5. Homicide	67
6. Other and unspecified non-transport accidents and their sequelae [UI]	33
7. Events of undetermined intent	31
8. Accidental drowning and submersion [UI]	25

Leading Causes of Injury Death among Men	Number of Deaths
1. Suicide	210
2. Accidental poisoning and exposure to noxious substances [UI]	169
3. Motor vehicle crash accidents [UI]	89
4. Falls [UI]	85
5. Homicide	46

Leading Causes of Injury Death among Women	Number of Deaths
1. Accidental poisoning and exposure to noxious substances [UI]	84
2. Suicide	69
3. Falls [UI]	63
4. Motor vehicle crash accidents [UI]	36
5. Homicide	21

[UI] Indicates unintentional injury deaths.

Source: Orange County Master Death File

Injury Deaths

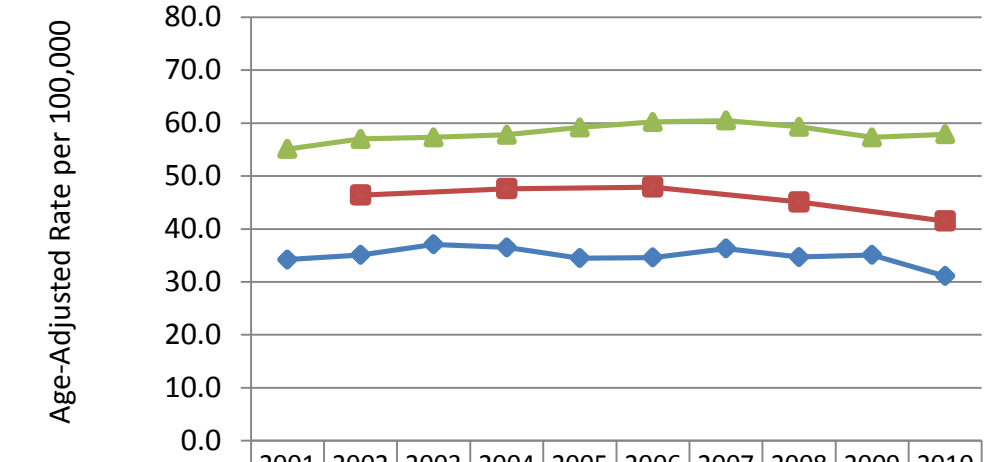
Impact: In 2010, there were **988 deaths** (686 among males and 302 among females) due to injuries in Orange County, which accounted for 6% of deaths in the county.

Description of Indicator: This indicator measures the number of deaths due to injury per 100,000 population based on the Orange County Master Death File. These deaths include those that are unintentional and intentional, such as homicides and suicides. Ten-year trends rates adjust for age while 2010 rates by race/ethnicity and geography are crude.

Importance of Indicator: Injuries, both unintentional and intentional, are a leading cause of death in Orange County and the leading cause of death among children, teens, and young adults.

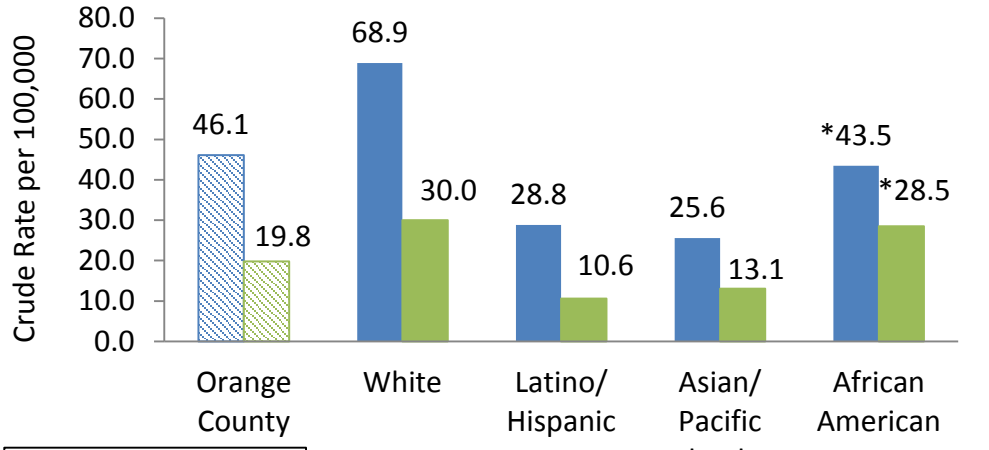
Healthy People 2020 Goal [LHI]: Not comparable with data shown.

Injury Deaths, 2001-2010



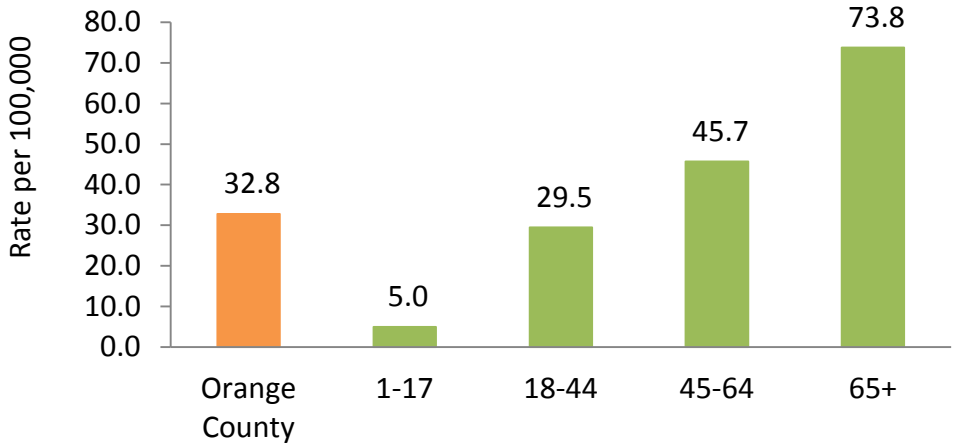
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	34.2	35.1	37.1	36.5	34.5	34.6	36.3	34.7	35.1	31.1
CA		46.4		47.6		47.9		45.1		41.5
US	55.1	57.0	57.3	57.8	59.2	60.2	60.5	59.3	57.3	57.9

Injury Deaths by Race/Ethnicity and Gender, Orange County, 2010



**Estimate unstable*

Injury Deaths by Age Group, Orange County, 2010

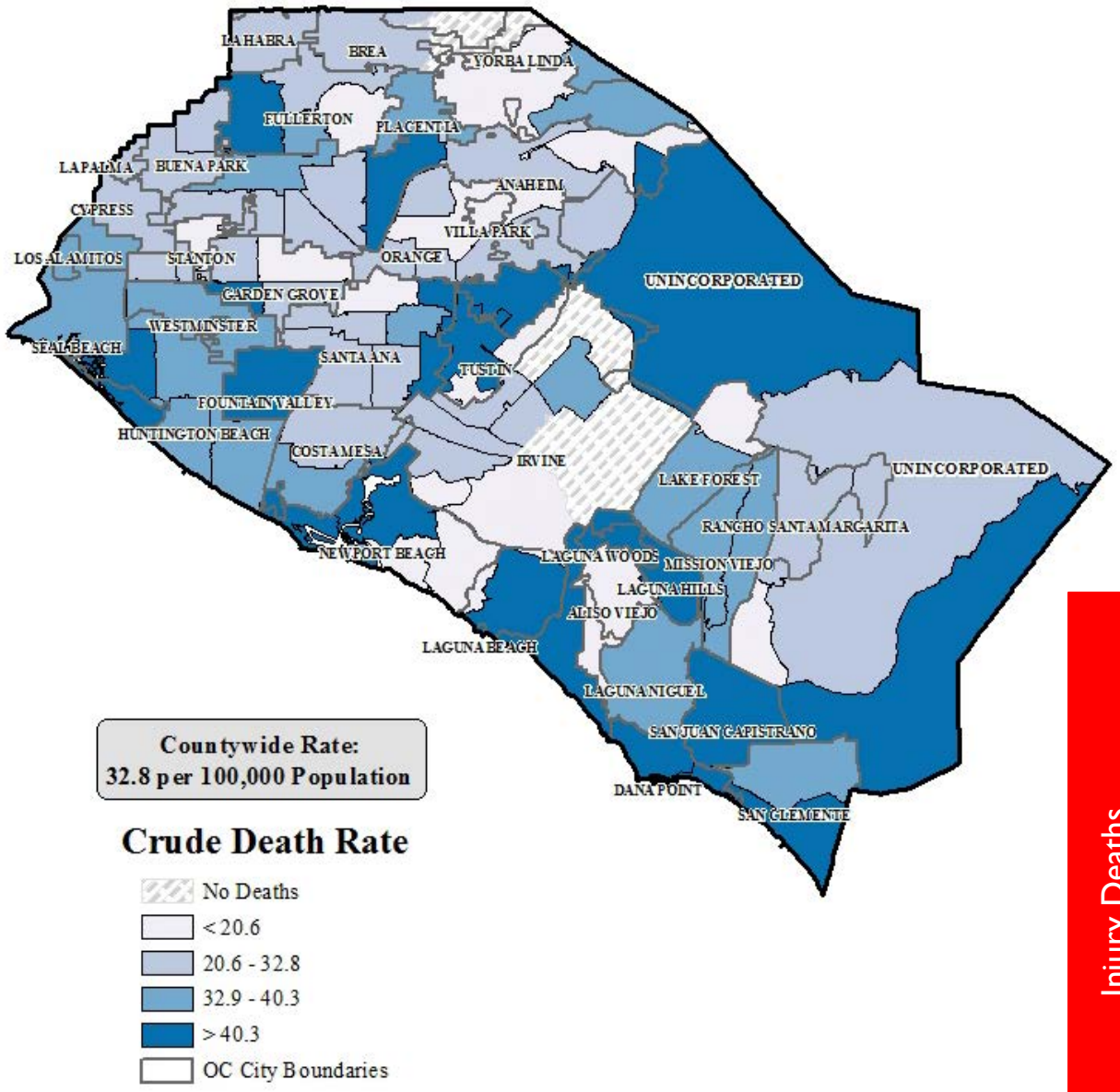


Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

City	Injury Deaths Crude Rate per 100,000, 2010
Aliso Viejo	20.9*
Irvine	22.1
Yorba Linda	26.5*
Brea	28.0*
Buena Park	28.6*
Orange	28.6
Garden Grove	28.7
Fullerton	28.9
Lake Forest	29.8*
Rancho Santa Margarita	31.3*
Cypress	31.4*
La Habra	31.5*
Laguna Niguel	31.8*
Orange County	32.8
Santa Ana	33.0
Anaheim	33.3
Costa Mesa	35.5
Tustin	37.1*
Huntington Beach	37.4
Mission Viejo	37.5*
Placentia	37.6*
Westminster	37.9*
Newport Beach	39.9*
San Juan Capistrano	40.5*
Seal Beach	41.4*
Fountain Valley	41.6*
San Clemente	42.5*
Laguna Hills	42.8*
Dana Point	60.0*
Laguna Beach	74.8*
Los Alamitos	78.6*
Laguna Woods	95.9*
La Palma	Estimate unstable
Stanton	Estimate unstable
Villa Park	Estimate unstable

**Estimate unstable*

Orange County Injury Deaths (2010)
Crude Rate per 100,000 Population



Source: 2010 Statistical Master Death File

Unintentional Injury Deaths

Impact: In 2010, **607 deaths** (402 among males and 205 among females) due to unintentional injuries in Orange County, which accounted for 3.5% of deaths in the county.

Description of Indicator: This indicator measures the number of deaths due to unintentional injury per 100,000 population based on the Orange County Master Death File. Ten-year trends and rates by race/ethnicity and gender adjust for age.

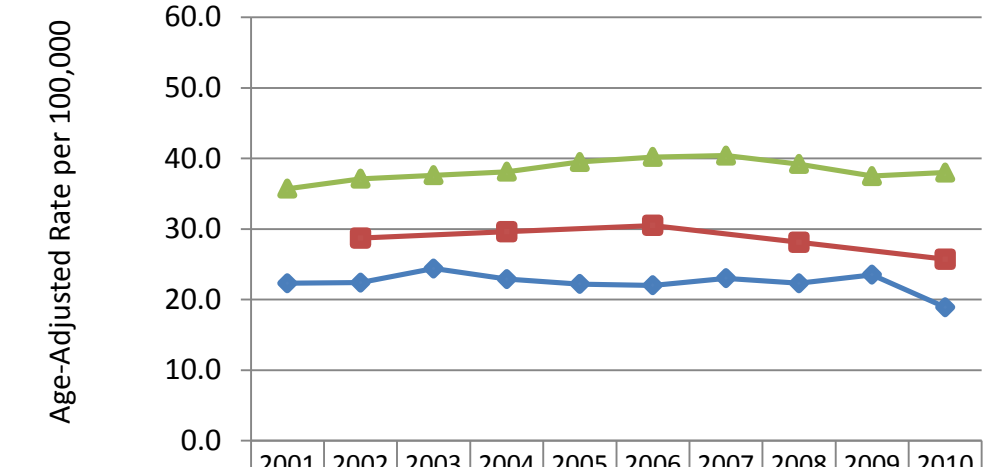
Importance of Indicator: Unintentional injuries include accidental poisonings, falls, motor vehicle accidents, and other accidents. These injuries are a leading cause of death in Orange County, particularly in younger age groups up to age 44.

Healthy People 2020 Goal: Reduce unintentional injury deaths from 40.0 deaths per 100,000 in 2007 (age-adjusted) to 36.0 per 100,000.

Technical Note: *Sub-county geographic detail is not shown due to unstable estimates based on small numbers.*

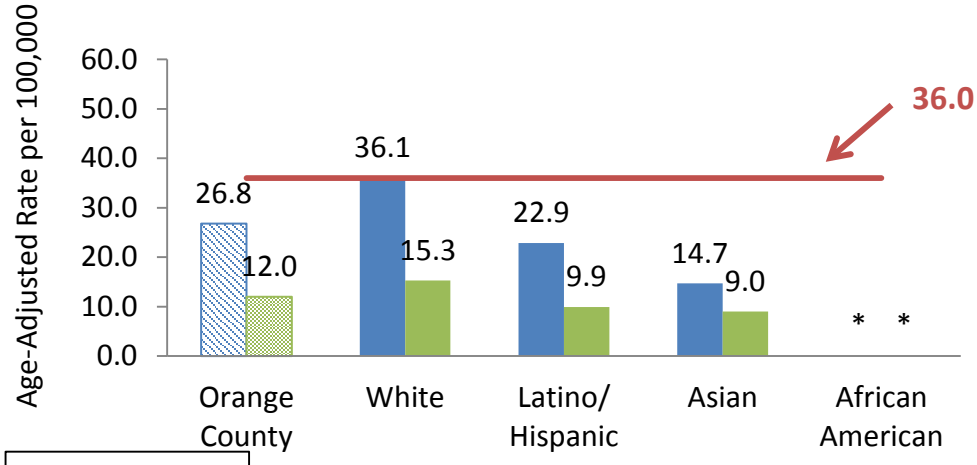
Indicates Healthy People 2020 Goal

Unintentional Injury Deaths, 2001-2010



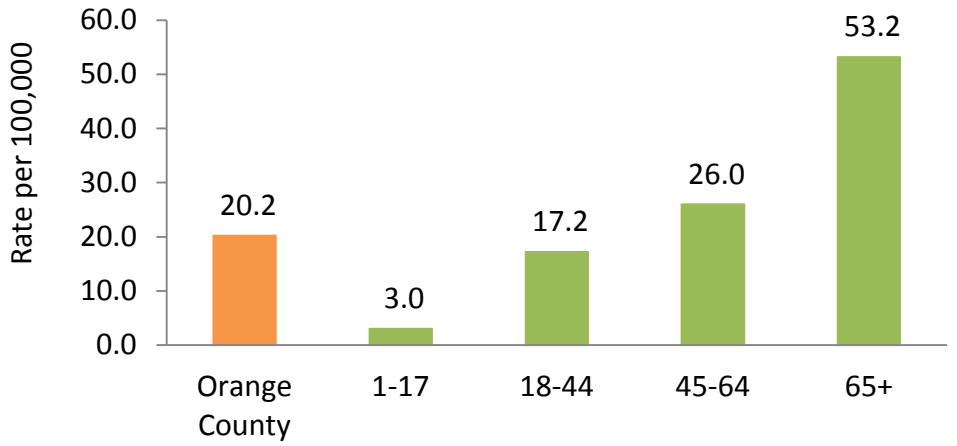
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	22.3	22.4	24.4	22.9	22.2	22.0	23.0	22.3	23.5	18.9
CA		28.7		29.6		30.5		28.1		25.7
US	35.7	37.1	37.6	38.1	39.5	40.2	40.4	39.2	37.5	38.0

Unintentional Injury Deaths by Race/Ethnicity and Gender, Orange County, 2010



**Estimate unstable*

Unintentional Injury Deaths by Age Group, Orange County, 2010



Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

Motor Vehicle Crash Deaths

Impact: In 2010, **125 deaths** (89 among males and 36 among females) due to motor vehicle crashes in Orange County, which accounted for less than 1.0% of deaths in the county.

Description of Indicator: This indicator measures the number of deaths due to motor vehicle crashes per 100,000 population based on the Orange County Master Death File. Ten-year trends rates and race/ethnicity adjust for age.

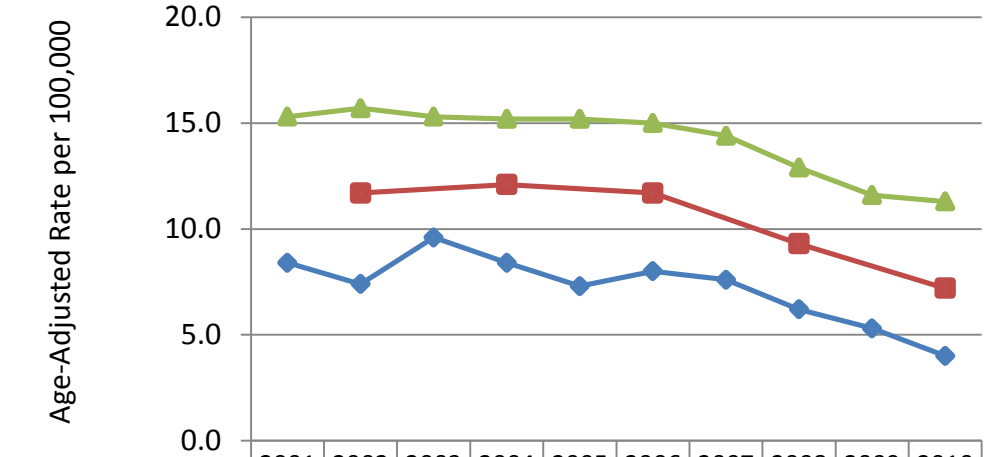
Importance of Indicator: Motor vehicle crashes are the 6th leading behavioral contributor to death in the United States [1] and a leading killer of children, teens, and young adults in Orange County. Medical and work lost costs due to motor vehicle crashes in California total over $4 billion and are the highest in the nation [2].

Healthy People 2020 Goal: Reduce motor vehicle traffic-related deaths from 13.8 deaths per 100,000 in 2007 to 12.4 per 100,000.

Technical Note: *Sub-county geographic detail is not shown due to unstable estimates based on small numbers.*

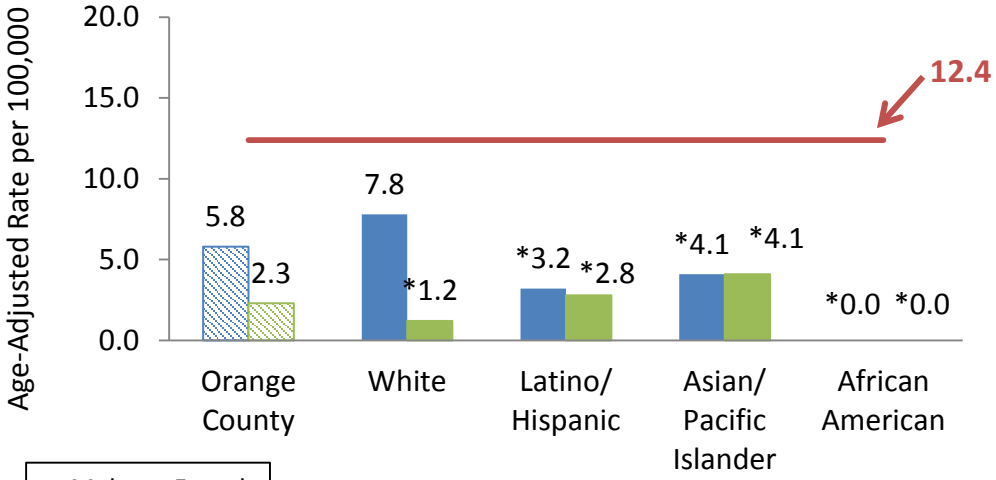
Indicates Healthy People 2020 Goal

Motor Vehicle Crash Deaths, 2001-2010



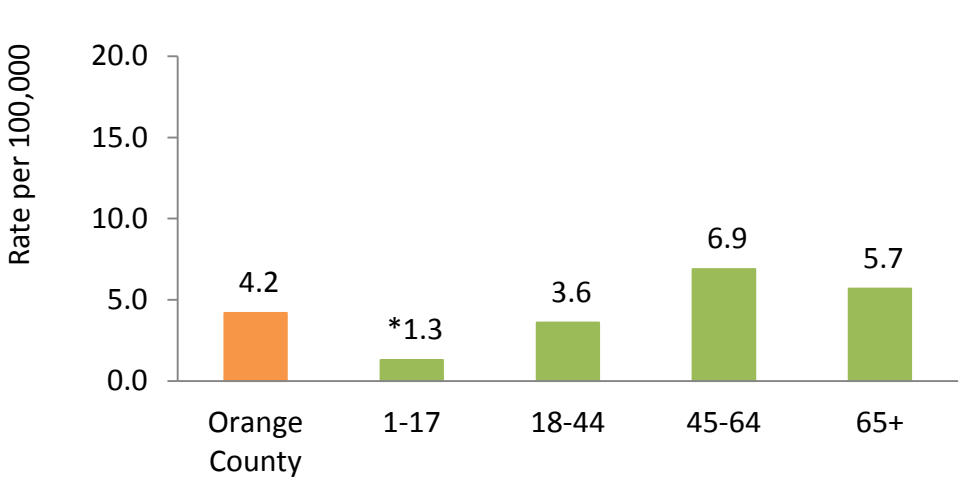
	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	8.4	7.4	9.6	8.4	7.3	8.0	7.6	6.2	5.3	4.0
CA		11.7		12.1		11.7		9.3		7.2
US	15.3	15.7	15.3	15.2	15.2	15.0	14.4	12.9	11.6	11.3

Motor Vehicle Crash Deaths by Race/Ethnicity and Gender, Orange County, 2010



**Estimate unstable*

Motor Vehicle Crash Deaths by Age Group, Orange County, 2010



**Estimate unstable*

Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

Motor Vehicle Crash Injuries

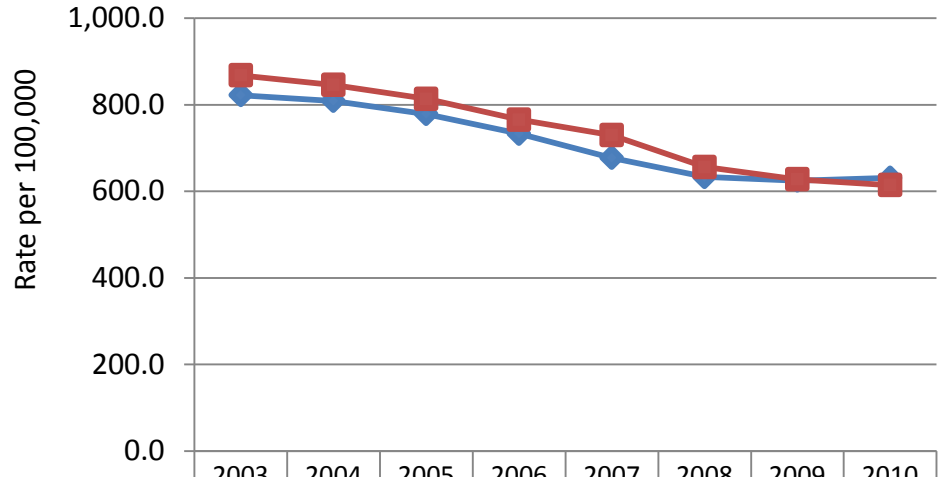
Impact: In 2010, there were **19,043 motor vehicle crash-related injuries** in Orange County for a rate of 631.2 per 100,000 population.

Description of Indicator: This indicator measures the number of persons injured in motor vehicle-related collisions per 100,000 population as reported through the California Highway Patrol.

Importance of Indicator: Motor vehicle crashes are the 6th leading behavioral contributor to death in the United States [3] and a leading killer of children, teens, and young adults in Orange County. Nationwide, the lifetime cost of motor vehicle crash injuries is almost $28 billion in hospital and emergency department visits [4]. The CDC has identified increasing seat belt and child passenger safety, improving teen driving safety, and reducing alcohol-impaired driving as key interventions to reduce motor vehicle crash-related injuries [5].

Healthy People 2020 Goal: Reduce nonfatal motor vehicle crash-related injuries from 771.4 per 100,000 in 2008 to 694.3 per 100,000.

Motor Vehicle Crash-Related Injuries, 2003-2010



	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	822.3	809.0	778.7	733.3	677.1	633.3	624.7	631.2
CA	868.0	845.7	813.7	765.8	729.6	656.3	627.8	614.6

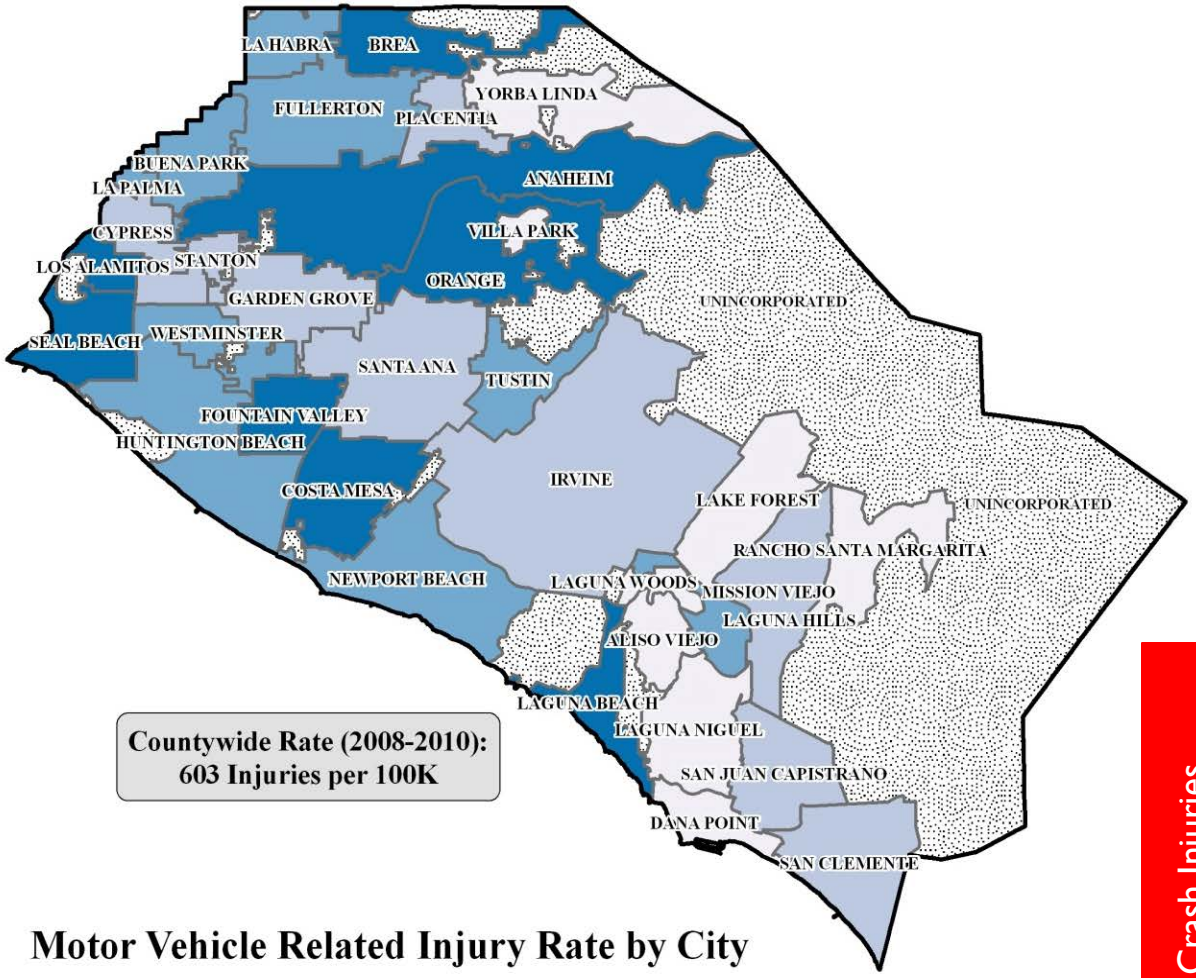
Comparison by Race/Ethnicity not available.

Comparison by Age Group not available.

Source: Statewide Integrated Traffic Records System (SWITRS), California Highway Patrol

City	Motor Vehicle Crash-Related Injuries per 100,000, 2008-2010
Villa Park	111.7
Aliso Viejo	160.7
Rancho Santa Margarita	173.2
Laguna Woods	173.4
Laguna Niguel	239.9
Yorba Linda	253.2
Lake Forest	299.5
Dana Point	328.5
Mission Viejo	343.2
Stanton	371.9
San Clemente	384.5
Cypress	384.5
Placentia	409.4
Garden Grove	545.2
Santa Ana	546.3
San Juan Capistrano	566.6
Irvine	576.7
Orange County	602.6
California	613.4
La Habra	623.7
Westminster	652.9
La Palma	667.2
Huntington Beach	675.6
Laguna Hills	677.8
Tustin	696.2
Newport Beach	699.2
Fullerton	720.7
Buena Park	727.3
Laguna Beach	741.5
Orange	769.8
Brea	795.8
Anaheim	882.8
Seal Beach	891.3
Costa Mesa	919.7
Los Alamitos	953.5
Fountain Valley	1016.5

Orange County Motor Vehicle Related Injuries (2008-2010) Injuries per 100,000 Population



Source: Statewide Integrated Traffic Records System (SWITRS), California Highway Patrol

Motor Vehicle-Related Bicyclist Injuries

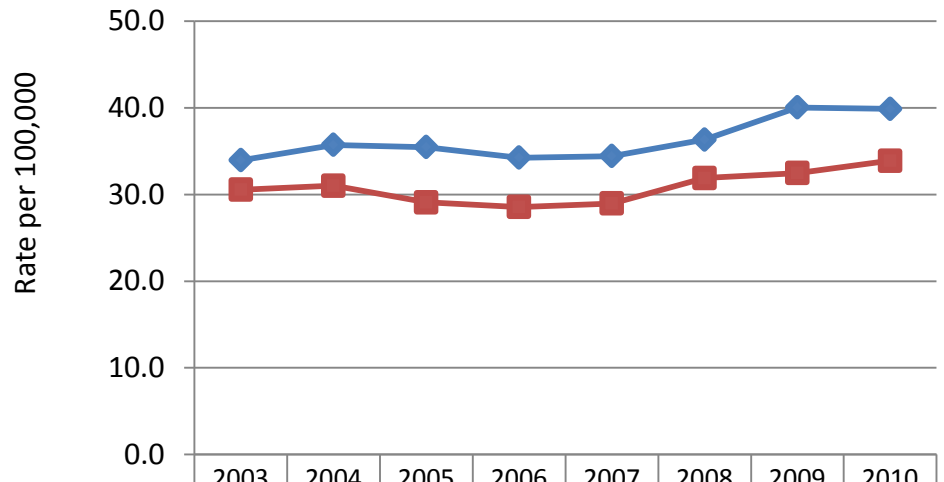
Impact: In 2010, there were **1,203 motor vehicle-related bicyclist injuries** in Orange County for a rate of 39.9 per 100,000 population.

Description of Indicator: This indicator measures the number of motor vehicle-related bicyclist injuries per 100,000 population as reported through the California Highway Patrol.

Importance of Indicator: Bicycling is an important form of physical activity which has been shown to improve physical and mental health, promote healthy weight, and reduce chronic disease risk [6]. As a non-motorized form of transportation, bicycling can serve as an important means of reducing air pollution. Real and perceived dangers to bicyclists can prevent them from engaging in this activity and, at the community level, inhibit the range of benefits bicycling can bring [6].

Healthy People 2020 Goal: Not comparable to data shown.

Motor Vehicle-Related Bicyclist Injuries, 2003-2010



	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	33.9	35.7	35.5	34.2	34.4	36.3	40.0	39.9
CA	30.6	31.0	29.1	28.6	29.0	31.9	32.5	33.9

Comparison by Race/Ethnicity not available.

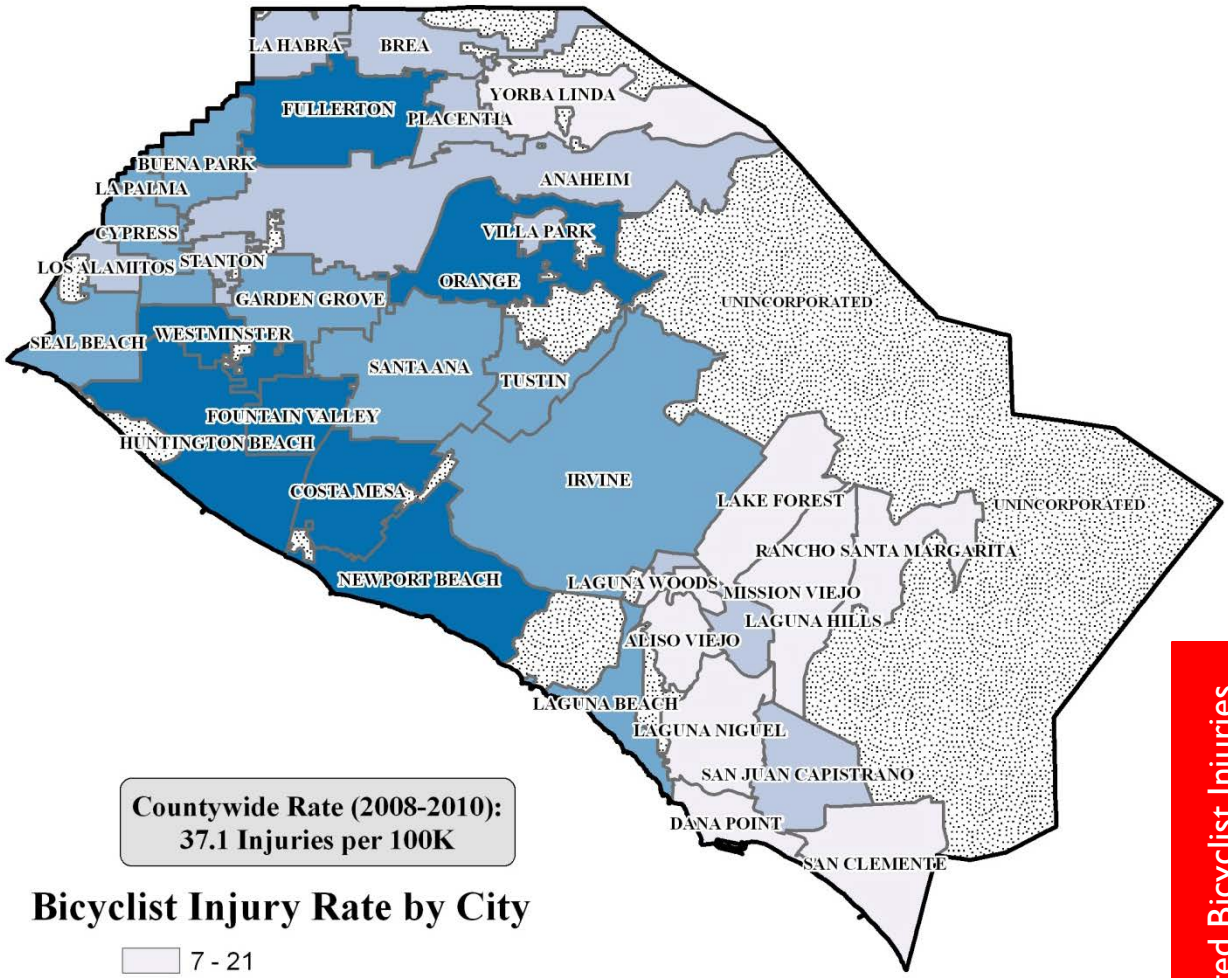
Comparison by Age Group not available.

Source: Statewide Integrated Traffic Records System (SWITRS), California Highway Patrol

City	Motor Vehicle-Related Bicyclist Injuries per 100,000, 2008-2010
Aliso Viejo	8.8*
Mission Viejo	11.0
Rancho Santa Margarita	11.4*
Laguna Niguel	12.9
Lake Forest	15.8
Yorba Linda	17.6
San Clemente	19.1
Dana Point	20.7*
San Juan Capistrano	21.7*
Laguna Hills	22.0*
Stanton	22.0
Brea	26.6
Villa Park	26.6
Los Alamitos	27.3*
Anaheim	27.4
Placentia	28.9
La Habra	29.7
California	31.8
Irvine	31.8
Tustin	32.6
Buena Park	34.0
Garden Grove	36.7
Santa Ana	36.7
Orange County	37.1
Seal Beach	37.4
Cypress	37.6
Laguna Beach	41.0
La Palma	41.2*
Westminster	43.3
Fullerton	46.1
Orange	46.7
Fountain Valley	51.5
Huntington Beach	74.2
Costa Mesa	80.5
Newport Beach	111.8
Laguna Woods	Estimate unstable

**Estimate unstable*

Orange County Motor Vehicle Related Bicyclist Injuries (2008-2010) Injuries per 100,000 Population



Source: Statewide Integrated Traffic Records System (SWITRS), California Highway Patrol

Motor Vehicle-Related Pedestrian Injuries

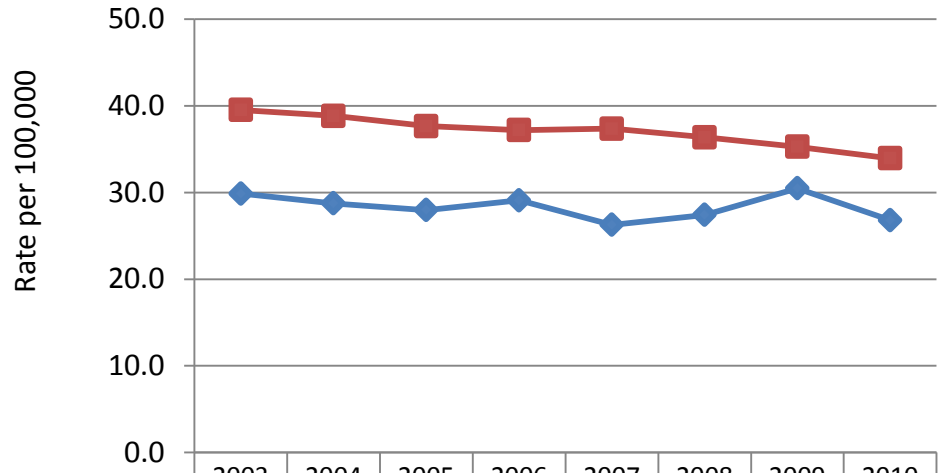
Impact: In 2010, there were **809 motor vehicle-related pedestrian injuries** in Orange County for a rate of 26.8 per 100,000 population.

Description of Indicator: This indicator measures the number of motor vehicle-related pedestrian injuries per 100,000 population as reported through the California Highway Patrol.

Importance of Indicator: There is a direct impact of injury and death tied to vehicle-related pedestrian accidents [7]. Additionally, perceived threats to pedestrian safety can act as a substantial barrier to walking, which is an important source of physical activity in communities [8, 9]. Walking can help maintain a healthy body weight [8], which protects individuals from the risk of health problems such as heart disease, cancer, stroke, diabetes and depression.

Healthy People 2020 Goal: Reduce nonfatal pedestrian injuries on public roads from 22.6 per 100,000 in 2008 to 20.3 per 100,000.

Motor Vehicle-Related Pedestrian Injuries, 2003-2010



	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	29.9	28.8	28.0	29.1	26.3	27.4	30.5	26.8
CA	39.5	38.9	37.7	37.2	37.4	36.4	35.3	33.9

Comparison by Race/Ethnicity not available.

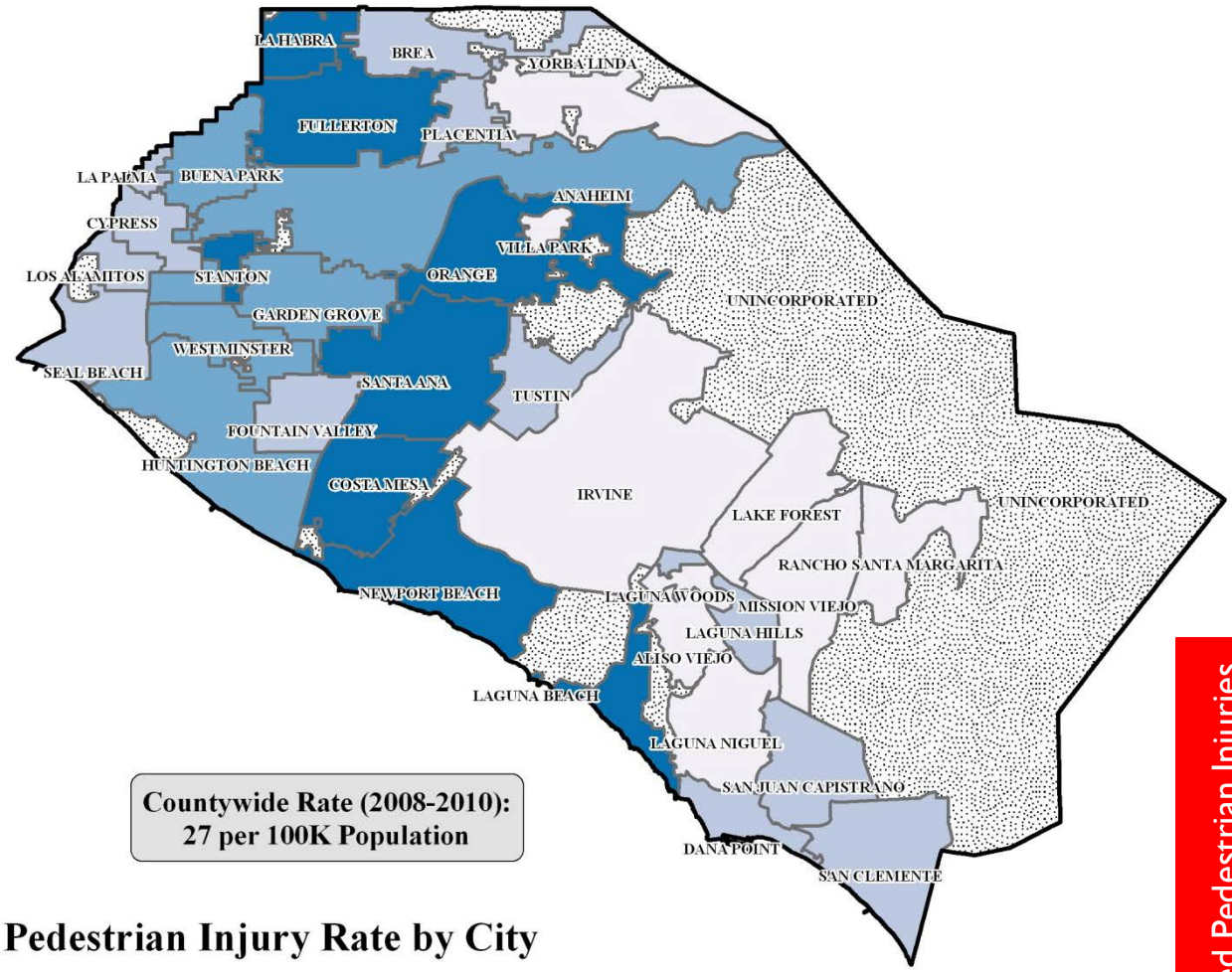
Comparison by Age Group not available.

Source: Statewide Integrated Traffic Records System (SWITRS), California Highway Patrol

City	Motor Vehicle-Related Pedestrian Injuries per 100,000, 2008-2010
Yorba Linda	5.9
Laguna Niguel	8.9*
Aliso Viejo	10.2*
Rancho Santa Margarita	10.7*
Mission Viejo	11.0
Irvine	12.7
Lake Forest	14.9
Seal Beach	16.7*
Dana Point	17.1*
San Juan Capistrano	18.1*
Placentia	18.6
Los Alamitos	19.1*
Fountain Valley	19.5
Laguna Hills	21.0*
Cypress	21.5
San Clemente	22.0
La Palma	22.7*
Brea	26.6
Tustin	26.8
Orange County	27.0
Anaheim	27.1
Garden Grove	27.1
Huntington Beach	27.9
Westminster	30.8
Buena Park	31.2
Orange	33.9
California	34.1
La Habra	36.7
Stanton	37.2
Fullerton	38.1
Santa Ana	40.7
Newport Beach	44.1
Costa Mesa	52.7
Laguna Beach	76.8
Laguna Woods	Estimate unstable
Villa Park	Estimate unstable

**Estimate unstable*

Orange County Motor Vehicle Related Pedestrian Injuries (2008-2010) Injuries per 100,000 Population



Countywide Rate (2008-2010): 27 per 100K Population

Pedestrian Injury Rate by City

- 4 - 15
- 16 - 27
- 28 - 31
- 32 - 77
- OC City Boundaries
- Data missing or unstable

Source: Statewide Integrated Traffic Records System (SWITRS), California Highway Patrol

References

Motor Vehicle Crash Deaths

1. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA. 2004;291(10):1238-1245.
2. Centers for Disease Control and Prevention. State-Based Costs of Deaths from Crashes. Accessed 8/13. Available at: http://www.cdc.gov/Motorvehiclesafety/statecosts/index.html.

Motor Vehicle Crash Injuries

3. Mokdad AH, et al. Actual causes of death in the United States, 2000. JAMA. 2004;291(10):1238-1245.
4. Naumann RB, Dellinger AM, Zaloshnja E, Lawrence BA, Miller TR. Incidence and total lifetime costs of motor vehicle-related fatal and nonfatal injury by road user type, United States, 2005. Traffic Inj Prev 2010;11:353-60.
5. Centers for Disease Control and Prevention. Winnable Battles, Motor Vehicle Injuries, Introduction letter from CDC Direcotr Dr. Thomas R. Frieden, January 2011. Accessed 8/13. Available at: http://www.cdc.gov/winnablebattles/motorvehicleinjury/pdf/motor_vehicle_wb_letter.pdf.

Motor Vehicle-Related Bicycle Injuries

6. Reynolds CO, et al. The impact of transportation infrastructure on bicycling injuries and crashes: A review of the literature. Environmental Health 2009;8:47.

Motor Vehicle-Related Pedestrian Injuries

7. Retting RA, et al. A review of evidence-based traffic engineering measures designed to reduce pedestrian-motor vehicle crashes. Am J Public Health;2003;93:1456-1463.
8. McNeill LH, et al. Social environment and physical activity: A review of concepts and evidence. Soc Sci Med. 2006;63:1011-1022.
9. Saelens BE and Handy SL. Built environment correlates of walking: A review. Med Sci Sports Exerc. 2008;40(7S):S550-S566.

Mental Health

Suicides

Impact: In 2010, there were **279 suicide deaths** (210 among males and 69 among females), making it the 10th leading cause of death in the county.

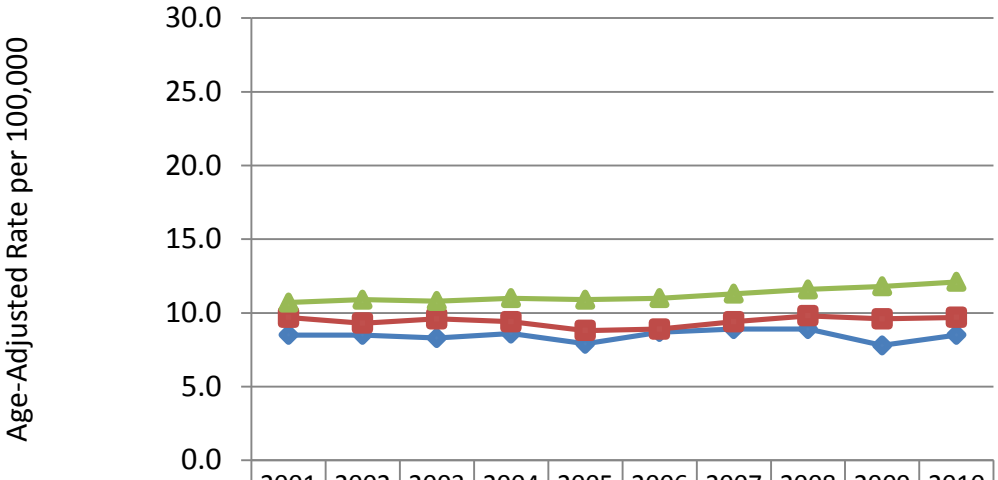
Description of Indicator: This indicator measures the rate of deaths per 100,000 population due to suicides based on the Orange County Master Death File. Rates shown adjust for age. Ten-year trends and rates by race/ethnicity adjust for age.

Importance of Indicator: Suicide is the 10th leading cause of death in Orange County. An estimated 11 attempted suicides occur for each suicide death [1]. Risk factors include depression and other mental disorders, substance-abuse disorder, family violence, and firearms in the home [2, 3]. Forms of psychotherapy and medications have been shown effective in reducing suicide attempts [4, 5].

Healthy People 2020 Goal [LHI]: Reduce the suicide rate from 11.3 suicides per 100,000 population in 2007 to 10.2 per 100,000.

Technical Note: *Sub-county geographic detail is not shown due to unstable estimates based on small numbers.*

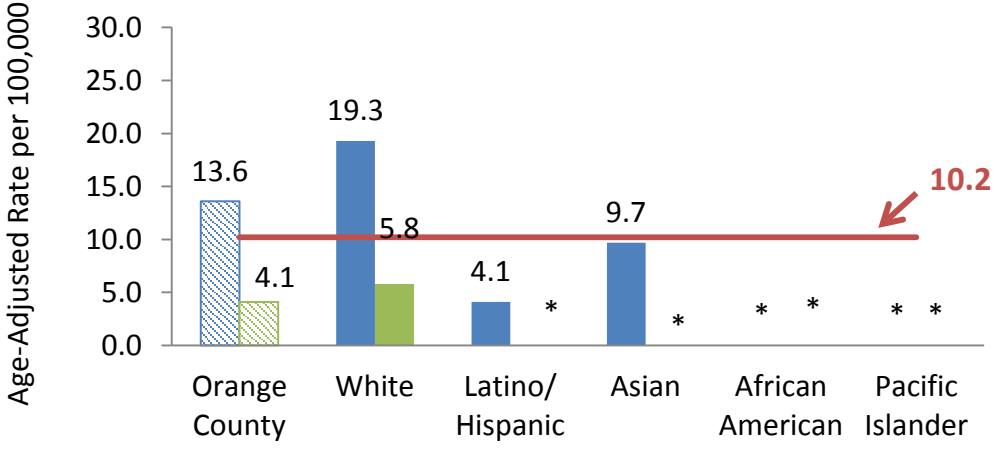
Suicides, 2001-2010



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Orange County	8.5	8.5	8.3	8.6	7.9	8.7	8.9	8.9	7.8	8.5
CA	9.7	9.3	9.6	9.4	8.8	8.9	9.4	9.8	9.6	9.7
US	10.7	10.9	10.8	11.0	10.9	11.0	11.3	11.6	11.8	12.1

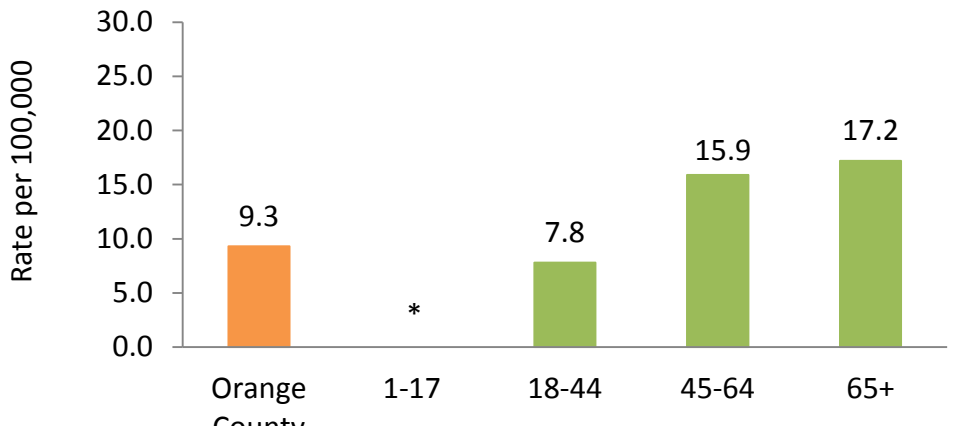
Indicates Healthy People 2020 Goal

Suicides by Race/Ethnicity and Gender, Orange County, 2010



**Estimate unstable*

Suicides by Age Group, Orange County, 2010



**Estimate unstable*

Source: OC Master Death File; CDPH Vital Statistics Query System; CDC WONDER

Depression

Note: *Up-to-date and stable local or state data on individuals with depression is unavailable.*

Impact: In 2011, **6.6% of adults** (4.7% of males and 8.3% of females) in the United States experienced Major Depressive Episodes (MDE).

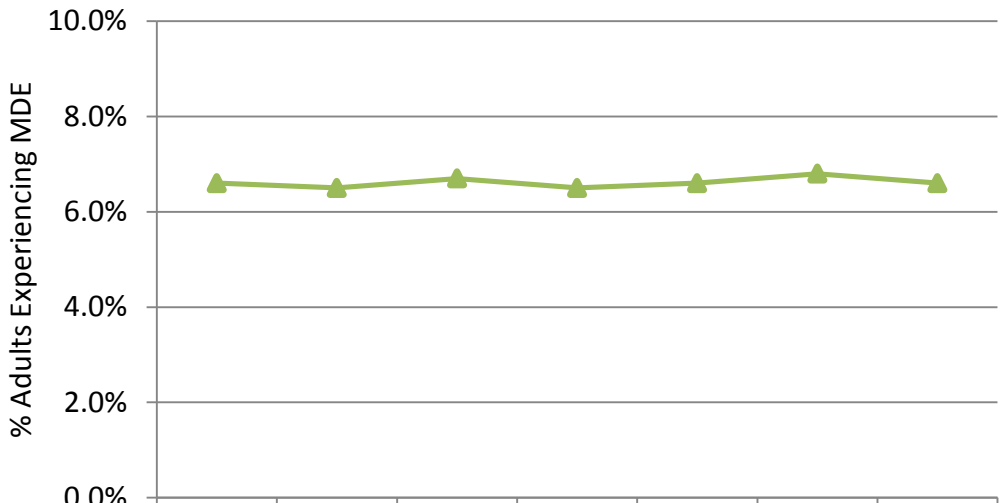
Description of Indicator: Proportion of individuals who met the criteria for a diagnosis of Major Depressive Episode based on DSM IV for adults as reported through the National Survey on Drug Use and Health.

Importance of Indicator: Major depressive disorder is characterized by a combination of symptoms that interfere with a person's ability to work, sleep, study, eat, and enjoy things that they once enjoyed [6]. Depression can make common chronic conditions, such as heart disease, cancer, diabetes, and obesity, worse [7]. Depression can also result in increased work absenteeism and short-term disability [7].

Healthy People 2020 Goal: Reduce the proportion of adults aged 18 years and older who experience Major Depressive Episodes from 6.4% in 2008 to 5.8%.

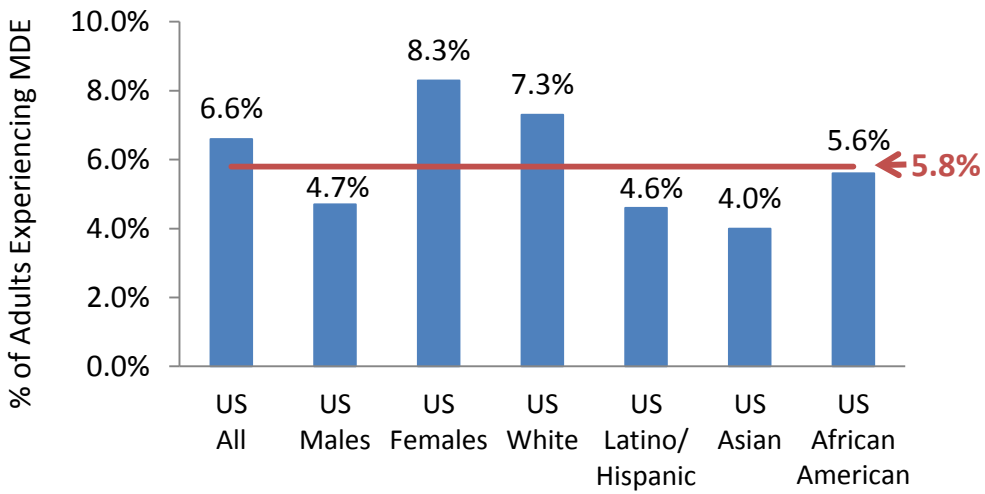
Indicates Healthy People 2020 Goal

Proportion of Adults Experiencing Major Depressive Episodes, United States, 2005-2011

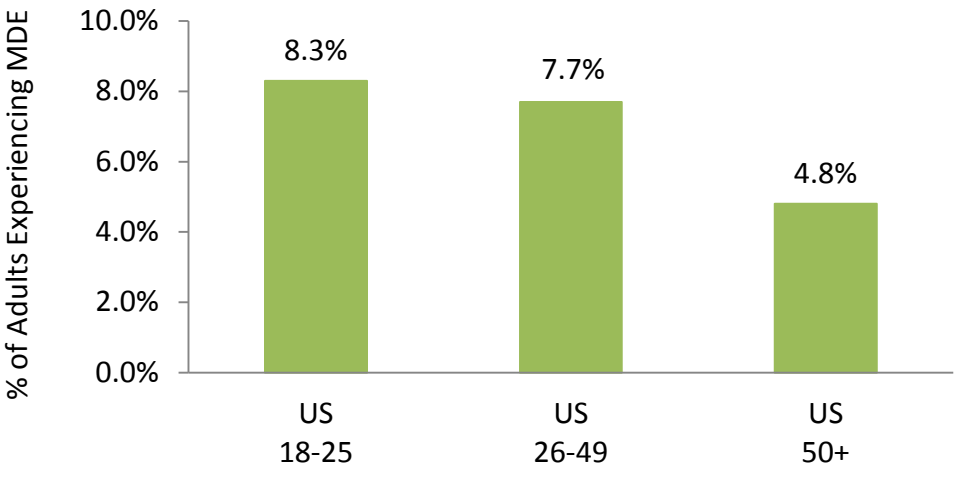


	2005	2006	2007	2008	2009	2010	2011
US	6.6%	6.5%	6.7%	6.5%	6.6%	6.8%	6.6%

Major Depressive Episodes by Gender and by Race/Ethnicity, United States, 2011



Major Depressive Episodes by Age Group, United States, 2011



Source: National Survey on Drug Use and Health

Mental Diseases and Disorders Hospitalizations

Impact: In 2010, **11,789 hospitalizations** were due to mental diseases and disorders in Orange County for a rate of 39.2 per 10,000 population. Mental diseases and disorders was the 6th leading cause of hospitalization, accounting for 5.6% of hospitalizations in the county.

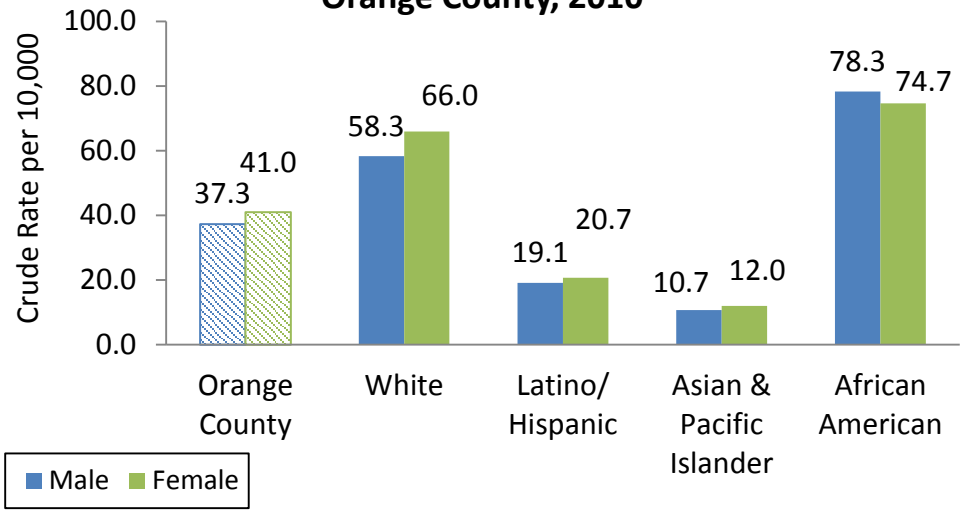
Description of Indicator: This indicator measures the rate of hospitalizations per 10,000 population due to mental diseases and disorders based on the Office of Statewide Health Planning and Development hospital discharge database.

Importance of Indicator: Mental health hospitalizations are the 2nd leading cause of hospitalization among 18-44 year olds in Orange County. Nationally, mood disorders such as bipolar disorder and depressive disorder, cognitive disorders, anxiety disorders, and psychotic disorders such as schizophrenia, are responsible for the vast majority of hospitalizations due to mental diseases and disorders [8]. Mental illness often co-occurs with somatic conditions, complicating treatment and raising overall medical costs [8]. Also, when mental illness goes untreated, it is more likely to result in hospitalization [8].

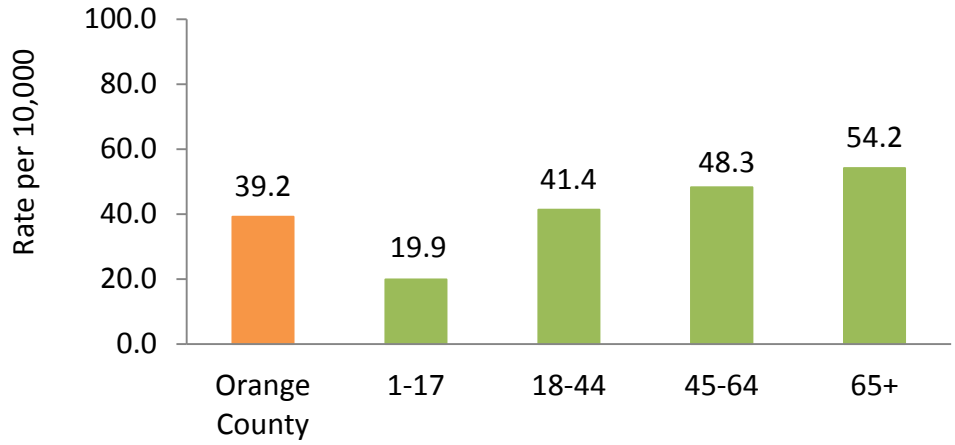
Healthy People 2020 Goal: No comparable goal.

Ten-Year trends not available.

Hospitalizations due to Mental Disease and Disorders by Race/Ethnicity and Gender, Orange County, 2010



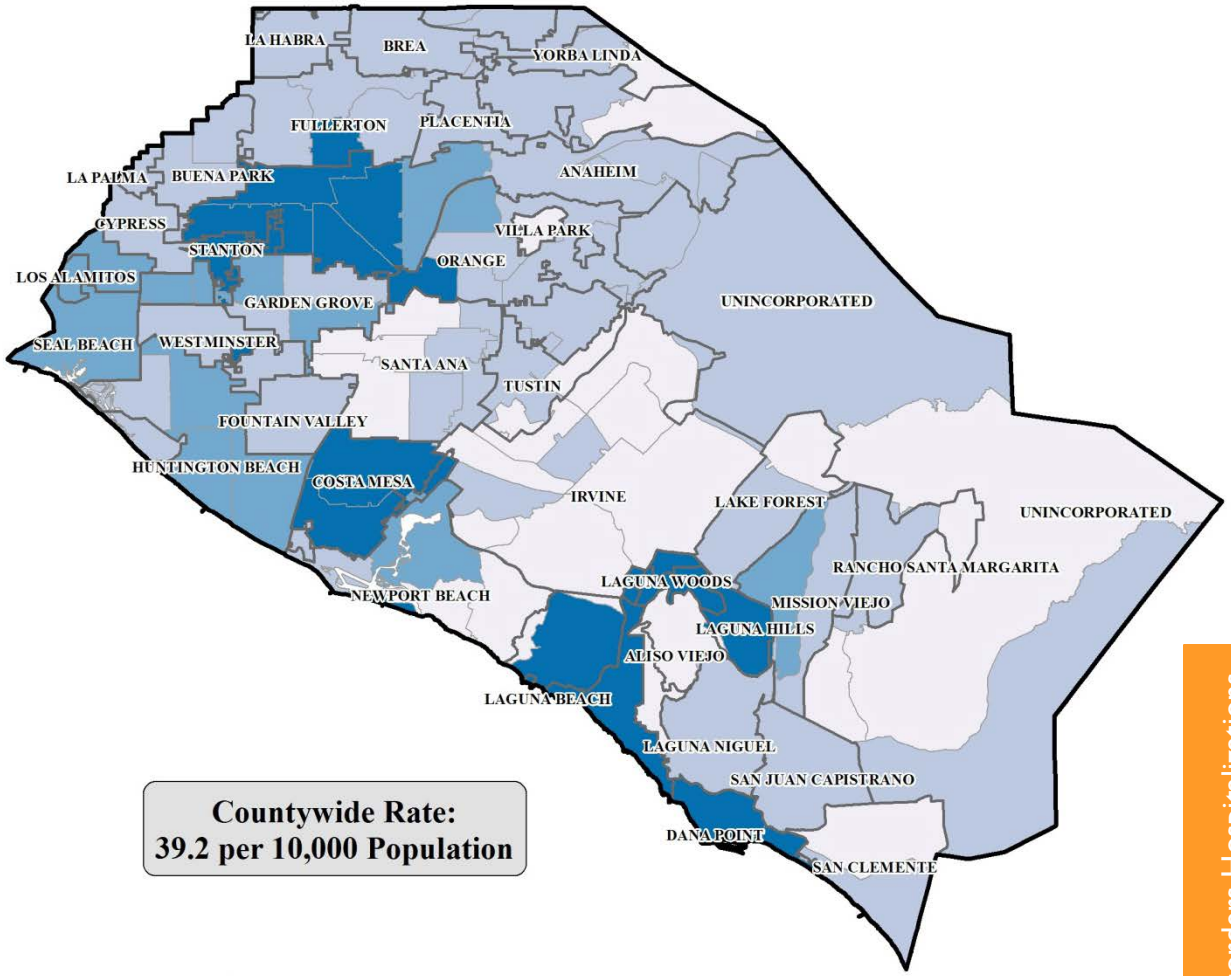
Hospitalizations due to Mental Disease and Disorders by Age Group, Orange County, 2010



Source: Office of Statewide Health Planning and Development Database

City	Hospitalizations due to Mental Disease Crude Rate per 100,000, 2010
Ladera Ranch	23.9
Irvine	24.3
Aliso Viejo	25.1
Lake Forest	29.9
Santa Ana	31.2
Placentia	31.3
Tustin	32.0
Yorba Linda	32.5
Rancho Santa Margarita	32.6
San Clemente	33.4
La Palma	33.4
Buena Park	33.8
Orange	34.7
Brea	35.1
San Juan Capistrano	35.6
La Habra	35.7
Newport Beach	36.2
Laguna Niguel	37.6
Fountain Valley	38.1
Cypress	38.3
Westminster	38.5
Mission Viejo	38.5
Orange County	39.2
Seal Beach	39.7
Stanton	40.1
Garden Grove	40.6
Fullerton	40.8
Huntington Beach	43.9
Laguna Hills	46.8
Costa Mesa	50.6
Dana Point	52.2
Laguna Woods	56.5
Laguna Beach	61.6
Anaheim	63.0
Los Alamitos	90.0
Villa Park	Estimate unstable

Orange County Mental Health Related Hospitalizations (2010) Crude Rate per 10,000 Population



Source: 2010 OSHPD Patient Discharge Data

References

Suicides

1. Centers for Disease Control and Prevention, National Center for Injury Prevention and Control. Web-based Injury Statistics Query and Reporting System (WISQARS): www.cdc.gov/ncipc/wisqars.
2. Moscicki EK. Epidemiology of completed and attempted suicide: toward a framework for prevention. Clinical Neuroscience Research, 2001; 1: 310-23.
3. Miller M, Azrael D, Hepburn L, Hemenway D, Lippmann SJ. The association between changes in household firearm ownership and rates of suicide in the United States, 1981-2002. *Injury Prevention* 2006;12:178-182; doi:10.1136/ip.2005.010850.
4. Linehan MM, Comtois KA, Murray AM, Brown MZ, Gallop RJ, Heard HL, Korslund KE, Tutek DA, Reynolds SK, Lindenboim N. Two-Year Randomized Controlled Trial and Follow-up of Dialectical Behavior Therapy vs Therapy by Experts for Suicidal Behaviors and Borderline Personality Disorder. Archives of General Psychiatry, 2006 Jul;63(7):757-766.
5. Meltzer HY, Alphs L, Green AI, Altamura AC, Anand R, Bertoldi A, Bourgeois M, Chouinard G, Islam MZ, Kane J, Krishnan R, Lindenmayer JP, Potkin S; International Suicide Prevention Trial Study Group. Clozapine treatment for suicidality in schizophrenia: International Suicide Prevention Trial (InterSePT). Archives of General Psychiatry, 2003; 60(1): 82-91.

Depression

6. National Institute of Mental Health. Depression. Accessed 8/13. Available at: http://www.nimh.nih.gov/health/topics/depression/index.shtml.
7. Centers for Disease Control and Prevention. CDC Features, An estimated 1 in 10 U.S. adults report depression. Accessed 8/13. Available at: http://www.cdc.gov/features/dsdepression/.

Mental Diseases and Disorders Hospitalizations

8. Saba, DK, et al. Hospital stays related to mental health, 2006. HCUP Statistical Brief #62. October 2008. Agency for Healthcare Research and Quality, Rockville, MD. Accessed 8/13. Available at: http://www.hcup-us.ahrq.gov/reports/statbriefs/sb62.pdf.

Technical Notes

Population Sources

Unless otherwise indicated in the report, population-based rates for California, Orange County ten-year trends, and cities were calculated using population figures from California Department of Finance data sets. Population-based rates for the United States and Orange County race/ethnicity and gender subgroups were calculated using population figures from the U.S. Census Bureau.

Age Adjustment

Where possible, age-adjusted rates have been used to show deaths in this report. Age adjusting rates is a way to make fairer comparisons between groups with different age distributions. For example, a racial/ethnic group having a higher percentage of elderly people may have higher rate of death or hospitalization than a racial/ethnic group with a younger population, merely because the elderly are more likely to die or be hospitalized. Age adjustment can make the different groups more comparable. Age adjustment involves using a "standard" population distribution to adjust death and hospitalization rates. The age-adjusted rates are rates that would have existed if the population under study had the same age distribution as the "standard" population.

Data Instability

Data suppression is used when the number of cases and population at risk suggests the statistical stability of rates is unacceptable. Throughout this report, asterisks are used to indicate rates that may be statistically unstable and should be interpreted with caution. Though specific data suppression criteria vary depending on the statistical conventions of indicator types, generally rates were suppressed if the population at risk was less than or equal to 100,000 and the number of cases was between 1 and 5. Rates not suppressed, but otherwise marked with an asterisk are considered unstable because they are based on less than 25 cases and deemed to have a high relative standard error. In the *Maternal, Child, and Adolescent Health* section, data were suppressed if the number of cases was fewer than 25, regardless of the population size. In the *Communicable Diseases* section, data were suppressed if the number of cases was fewer than 5, regardless of the population size.

Suggested Citation

County of Orange, Health Care Agency, Public Health Services. *Orange County Health Profile 2013*. December 2013.
Copies of this report are available online at http://www.ochealthinfo.com/pubs

Acronyms and Abbreviations

Where possible, acronyms and abbreviations are defined on each page of this report where it appears. Due to space limitations, the following acronyms and abbreviations may not have been defined on the page of the report where it appears.

CA – California

CDC – Centers for Disease Control and Prevention

CDC WONDER – CDC Wide-ranging Online Data for Epidemiologic Research

CDPH – California Department of Public Health

FBI – Federal Bureau of Investigations

STD – Sexually Transmitted Disease

OC – Orange County

OCHCA – Orange County Health Care Agency

OSPHD – Office of Statewide Health Planning and Development

US – United States

Orange County's

HEALTHIER TOGETHER

2013

Orange County Health Profile

Public Health Services, Orange County Health Care Agency
405 W. 5th Street, Santa Ana, CA
(714) 796-0404 http://ochealthinfo.com/pubs