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# Orange County Asthma Profile

modified on: Thursday, 01 September 2016

**In Orange County, approximately 323,000 children and adults have been diagnosed with asthma.**

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## COUNTY PROFILE INDICATORS

|                            |                                   |
|----------------------------|-----------------------------------|
| Lifetime Asthma Prevalence | Emergency Department Visits       |
| Active Asthma Prevalence   | Asthma Hospitalizations           |
| Work-Related Asthma        | Asthma Deaths                     |
| Asthma Management Plans    | Outdoor Air Quality <sup>15</sup> |
| Asthma Risk Factors        | Notes                             |

| County Population |                  |      | County Population           |      |
|-------------------|------------------|------|-----------------------------|------|
| Age               | Population       | %    | Race/Ethnicity <sup>1</sup> | %    |
| 0-4               | 197,867          | 6.3  | Asian/PI                    | 18.4 |
| 5-17              | 521,905          | 16.7 | Black                       | 1.6  |
| 18-64             | 1,995,613        | 64.0 | Hispanic                    | 35.1 |
| 65+               | 403,333          | 12.9 | White                       | 42.2 |
| <b>Total</b>      | <b>3,118,718</b> |      | <b>Other</b>                | 2.6  |

DATASOURCE: California Department of Finance, 2014 (2013 release)

## LIFETIME ASTHMA PREVALENCE,<sup>2</sup> 2011-2012

| Percent with Lifetime Asthma (95% Confidence Interval <sup>3</sup> ) |                 |                        |                         |
|----------------------------------------------------------------------|-----------------|------------------------|-------------------------|
|                                                                      | Age             | Orange County          | California              |
| <b>Children</b>                                                      | 0-4             | --                     | 9.7 (7.2-12.3)          |
|                                                                      | 5-17            | 13.4 (8.6-18.2)        | 17.1 (15.5-18.7)        |
| <b>Adults</b>                                                        | 18-64           | 10.5 (8.5-12.5)        | 14.0 (13.4-14.7)        |
|                                                                      | 65+             | 10.5 (7.6-13.4)        | 12.0 (11.1-12.8)        |
| <b>Totals:</b>                                                       | 0-17            | 11.7 (7.8-15.6)        | 15.4 (14.0-16.7)        |
|                                                                      | 18+             | 10.5 (8.8-12.2)        | 13.7 (13.1-14.3)        |
|                                                                      | <b>All Ages</b> | <b>10.8 (9.2-12.4)</b> | <b>14.1 (13.6-14.6)</b> |

datasource: California Health Interview Survey (CHIS), 2014

## ACTIVE ASTHMA PREVALENCE,<sup>4</sup> 2014

| Percent with Active Asthma (95% Confidence Interval <sup>3</sup> ) |                 |                      |                      |
|--------------------------------------------------------------------|-----------------|----------------------|----------------------|
|                                                                    | Age             | Orange County        | California           |
| <b>Children</b>                                                    | 0-4             | --                   | 6.3 (4.6-8.0)        |
|                                                                    | 5-17            | 6.6* (1.1-12.0)      | 11.6 (10.2-13.0)     |
| <b>Adults</b>                                                      | 18-64           | 8.1 (4.6-11.6)       | 7.6 (7.1-8.1)        |
|                                                                    | 65+             | 7.8* (2.8-12.8)      | 8.2 (7.5-8.9)        |
| <b>Totals:</b>                                                     | 0-17            | 7.5* (0.4-14.7)      | 10.1 (9.0-11.3)      |
|                                                                    | 18+             | 8.0 (5.0-11.1)       | 7.7 (7.3-8.2)        |
|                                                                    | <b>All Ages</b> | <b>6.4 (5.1-7.7)</b> | <b>8.3 (7.9-8.7)</b> |

datasource: California Health Interview Survey (CHIS), 2014

## WORK-RELATED ASTHMA<sup>5</sup>

Studies show that asthma is commonly caused or triggered by workplace exposures, but work-related asthma (<http://www.cdph.ca.gov/programs/ohsep/Pages/Asthma.aspx>) is under-recognized and under-diagnosed. Research confirms that 15-30% of current adult asthma was initiated by work exposures, meaning that **an estimated 21,150-42,300 adults in Orange County have asthma caused by work.**<sup>6</sup>

datasource: CHIS, 2014

## ASTHMA MANAGEMENT PLANS

National guidelines recommend that health care providers give all patients with asthma a written self-management plan. **In Orange County, 90.5%\* (95% CI 84.4-96.5) of people with asthma have NOT received a written asthma management plan from a health care provider.**

datasource: CHIS, 2014

## ASTHMA RISK FACTORS, 2014

| Orange County Risk Factors                                              |                                   |
|-------------------------------------------------------------------------|-----------------------------------|
| Risk Factor                                                             | Percent (95% Confidence Interval) |
| Percent of adults who are current smokers                               | 10.8 (8.8-12.8)                   |
| Percent of adults and children exposed to second-hand smoke in the home | 4.4 (3.3-5.5)                     |
| Percent of adults who are obese <sup>7</sup> (BMI>=30)                  | 23.1 (20.5-25.8)                  |
| Percent of people below the Federal Poverty Level                       | 9.8 (NA)                          |
| Unemployment Rate                                                       | 9.0 (NA)                          |

datasource: CHIS, 2011-2012

## ASTHMA DEATHS,<sup>9</sup> 2008-2010

| Number of Deaths Due to Asthma (N) and Age-Adjusted Rate <sup>9</sup> (per 1,000,000 residents) |                 |      |            |       |      |
|-------------------------------------------------------------------------------------------------|-----------------|------|------------|-------|------|
| Orange County                                                                                   |                 |      | California |       |      |
| Age                                                                                             | N               | Rate | N          | Rate  |      |
| <b>Children</b>                                                                                 | <b>0-17</b>     | --   | --         | 57    | 1.9  |
| <b>Adults</b>                                                                                   | <b>18+</b>      | 68   | 10.2       | 1,198 | 14.3 |
| <b>Totals</b>                                                                                   | <b>All Ages</b> | 71   | 7.9        | 1,255 | 11.1 |

datasource: California Death Statistical Master Files, 2008-2010

ASTHMA EMERGENCY DEPARTMENT VISITS,<sup>10</sup> 2014Number of ED Visits Due to Asthma (N) and Age-Adjusted Rate<sup>11</sup> (per 10,000 residents)

|          | Age      | Orange County |      | California |       |
|----------|----------|---------------|------|------------|-------|
|          |          | N             | Rate | N          | Rate  |
| Children | 0-4      | 1,548         | 78.9 | 26,268     | 103.4 |
|          | 5-17     | 2,496         | 48.6 | 47,613     | 72.4  |
| Adults   | 18-64    | 4,608         | 22.9 | 95,689     | 39.2  |
|          | 65+      | 1,129         | 28.5 | 17,374     | 36.1  |
| Totals:  | 0-17     | 4,044         | 56.7 | 73,881     | 80.7  |
|          | 18+      | 5,737         | 23.8 | 113,063    | 38.6  |
|          | All Ages | 9,781         | 32.3 | 186,944    | 49.5  |

datasource: Office of Statewide Health Planning and Development (OSHPD), 2014

## Expected Source of Payment for Asthma ED Visits

| Payment Source | Orange County | California |
|----------------|---------------|------------|
| Medicare       | 13.10%        | 13.29%     |
| Medi-Cal       | 39.74%        | 48.56%     |
| Private        | 37.30%        | 26.32%     |
| Other          | 9.87%         | 11.84%     |

datasource: Office of Statewide Health Planning and Development (OSHPD), 2014

ASTHMA HOSPITALIZATIONS,<sup>12</sup> 2014Number of Hospitalizations Due to Asthma (N) and Age-Adjusted Rate<sup>11</sup> (per 10,000 residents)

|          | Age      | Orange County |      | California |      |
|----------|----------|---------------|------|------------|------|
|          |          | N             | Rate | N          | Rate |
| Children | 0-4      | 271           | 13.8 | 4,994      | 19.6 |
|          | 5-17     | 238           | 4.7  | 5,037      | 7.7  |
| Adults   | 18-64    | 630           | 3.0  | 12,134     | 4.7  |
|          | 65+      | 502           | 12.8 | 7,208      | 15.2 |
| Totals:  | 0-17     | 509           | 7.1  | 10,031     | 10.9 |
|          | 18+      | 1,132         | 4.6  | 19,342     | 6.5  |
|          | All Ages | 1,641         | 5.3  | 29,373     | 7.6  |

datasource: Office of Statewide Health Planning and Development (OSHPD), 2014

Average Charges<sup>13</sup> Per Asthma Hospitalization

|          | Age      | Orange County | California  |
|----------|----------|---------------|-------------|
| Children | 0-17     | \$30,498.09   | \$27,127.04 |
| Adults   | 18+      | \$43,378.85   | \$46,783.17 |
| Total    | All Ages | \$39,241.96   | \$39,860.44 |

datasource: Office of Statewide Health Planning and Development (OSHPD), 2014

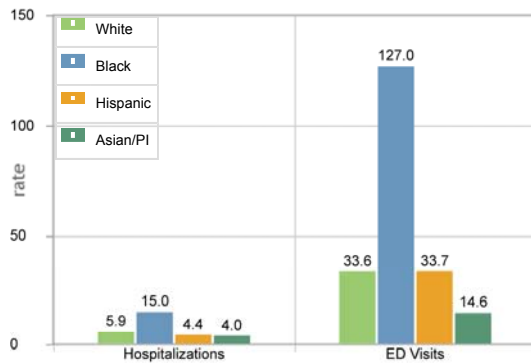
## Expected Source of Payment for Asthma Hospitalizations

| Payment Source | Orange County | California |
|----------------|---------------|------------|
| Medicare       | 34.25%        | 28.24%     |
| Medi-Cal       | 36.20%        | 46.46%     |
| Private        | 25.47%        | 20.34%     |
| Other          | 4.08%         | 4.96%      |

datasource: Office of Statewide Health Planning and Development (OSHPD), 2014

# ASTHMA DISPARITIES

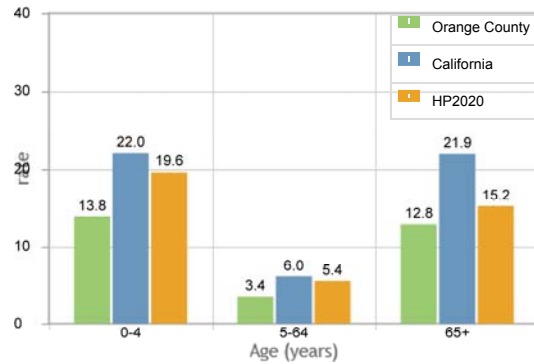
**Age-Adjusted Asthma Hospitalizations and ED Visits per 10,000 Orange County Residents by Race/Ethnicity, 2014**



Data Source: datasources: Office of Statewide Health Planning and Development (OSHPD), 2014

# HEALTHY PEOPLE 2010<sup>14</sup>

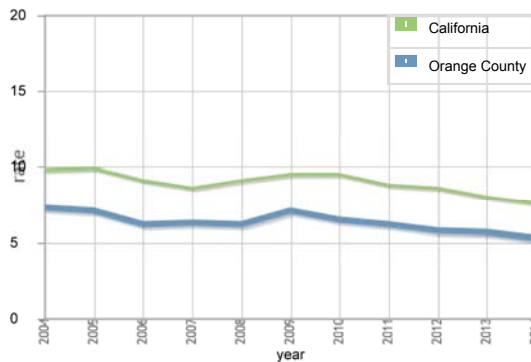
**Asthma Hospitalizations per 10,000 Residents by Age, Compared to HP2020 Targets, California and Orange County, 2014**



Data Source: datasources: Office of Statewide Health Planning and Development (OSHPD), 2014 .

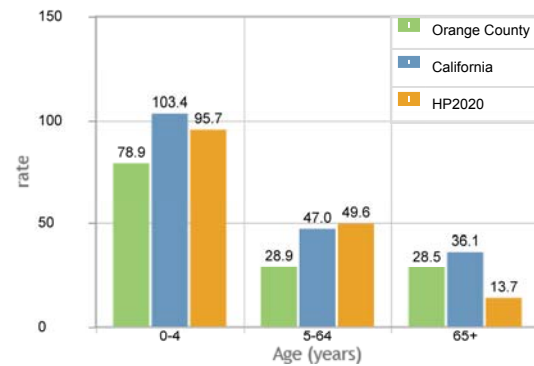
# HOSPITALIZATION RATES OVER TIME

**Age-Adjusted Asthma Hospitalizations per 10,000 Residents, Orange County and California, 2004-2014**



Data Source: datasources: Office of Statewide Health Planning and Development (OSHPD) , 2004- 2014.

**Asthma ED Visits per 10,000 Residents by Age, Compared to HP2020 Targets, California and Orange County, 2014**



Data Source: datasources: Office of Statewide Health Planning and Development (OSHPD), 2014.

## NOTES

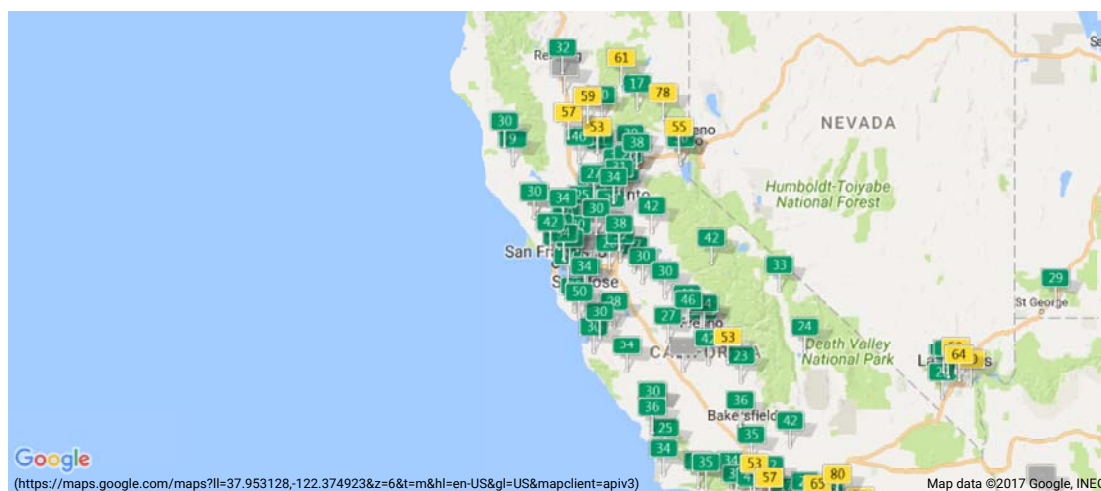
\*Estimates marked with an asterisk (\*) have large confidence intervals, interpret with caution. Estimates marked with a dash (-) are statistically unstable, so are unreported.

1. PI = Pacific Islander; Please see technical notes for more information on race/ethnicity categorizations.
2. Lifetime asthma prevalence is the proportion of people in the population who have ever been diagnosed with asthma by a health provider.
3. The 95% confidence interval (CI) is a range that expresses a level of certainty about an estimate based on the margin of error.  
The 95% CI means that we are 95 percent confident that this range contains the true population percent. A narrow CI means that there is less variability in the estimate and/or there is a larger sample size. A wide CI indicates more variability and/or a smaller sample size.
4. Active asthma prevalence is the proportion of people in the population who have ever been diagnosed with asthma by a health provider and report that they still have asthma and/or report that they had an episode or attack within the past 12 months.
5. Work-related asthma is asthma that is caused or triggered by conditions or substances in the workplace.
6. Balmes J, Becklake M, Blanc P, et al. Environmental and Occupational Health Assembly, American Thoracic Society. American Thoracic Society Statement: Occupational Contribution to the Burden of Airway Disease. Am J Respir Crit Care Med. 2003;167:787-797; Lutzker L, Rafferty A, Brunner W, et al. Prevalence of Work-related Asthma in Michigan, Minnesota, and Oregon. Journal of Asthma. 2010;47:156-161.
7. Obesity is defined as a body mass index (BMI) of 30 or greater.
8. Data Sources for Asthma Risk Factors: Smoking — CHIS, 2009; Obesity — CHIS, 2009; Poverty Level — American Community Survey, 2007-2009; Unemployment Rate — State of California Employment Development Department, 2009
9. An asthma death is a death where asthma was indicated as the underlying cause on the death certificate. The rate of asthma deaths is the number of deaths per 1,000,000 residents, age-adjusted to the 2000 U.S. population.
10. An asthma ED visit is an admission to a licensed ED in California with the primary diagnosis of asthma. The rate of asthma ED visits is the number of visits per 10,000 residents, age-adjusted to the 2000 U.S. population.
11. Population denominators for rates are from the California Department of Finance. All rates are age-adjusted to the 2000 U.S. population. Age-adjusted rates are modified to eliminate the effect of different age distributions in different populations. Rates based on numbers <20 are not reported.
12. An asthma hospitalization is a discharge from a licensed acute care hospital in California with the primary diagnosis of asthma. The rate of asthma hospitalizations is the number of hospitalizations per 10,000 residents, age-adjusted to the 2000 U.S. population.
13. Charges for asthma hospitalizations are the only type of data available to assess the costs of asthma in California counties. However, there are many other costs associated with asthma, including other types of health care utilization, medications, and indirect costs due to factors such as school and work missed.
14. Healthy People 2010 (HP2010) is a set of national benchmarks for a wide range of health topics, including asthma. For more information on HP2010, visit [www.healthypeople.gov](http://www.healthypeople.gov) ([www.healthypeople.gov](http://www.healthypeople.gov)).
15. Outdoor air quality data—including exposures such as PM2.5, PM10, ozone, and traffic pollution—can be found online through the California Environmental Health Tracking Program's Air Quality Data Query ([http://www.ehib.org/page.jsp?page\\_key=80](http://www.ehib.org/page.jsp?page_key=80)) or on the California Air Resources Board (<http://www.arb.ca.gov/aqd/aqdpag.htm>) website.

Further details about the data presented in this report can be found in the accompanying Technical Notes document.

## AIR QUALITY MAP

- Plots markers based on the composite AQI calculated with the US EPA standard.



## Asthma Data

The Asthma in California Report  
(/asthma-data/cal-asthma-report)  
County Asthma Profiles  
(/asthma-data/county-asthma-profiles)  
County Comparisons  
(/asthma-data/county-comparisons)  
Custom Data Request  
(/asthma-data/datarequest)  
Fact Sheets  
(/asthma-data/factsheets)

## Projects

California Asthma Quality Improvement Initiative

## Resources

Publications  
(/resources/publications)  
Childcare Training Video  
(/resources/childcare-training-video)

## Collaborations

CAP  
(/collaborations/cap)  
SEHAC (Schools)  
(/collaborations/sehac)  
CHHC (Housing)  
(/collaborations/chhc)

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