



California Asthma Facts

Volume 1, Issue 2

California Department of Health Services

December 2003

Asthma in California: Meeting the Challenge of Healthy People 2010

What is Healthy People 2010?

Healthy People 2010 (HP2010) is a comprehensive set of national objectives for the decade. It is composed of 28 focus areas and 467 specific objectives. HP2010 has evolved through a collaborative process and is now entering its third decade. It is designed to measure progress over time and has two overarching goals (1) Increase years and quality of healthy life and (2) Eliminate health disparities. As a public health surveillance tool, HP2010 can be used by local and state leaders to develop community wide and statewide efforts that promote healthy behaviors, create healthy environments, and increase access to high-quality health care. Visit the [Healthy People 2010](http://www.healthypeople.gov) Web site for more information.



Healthy People 2010 Asthma Objectives

The respiratory disease section of HP2010 contains eight objectives that represent the most important issues in asthma for this decade. The objectives target deaths from asthma, hospitalizations for asthma, hospital emergency department visits for asthma, activity limitations, school or work days lost, patient education, appropriate asthma care, and asthma surveillance systems. Currently, California tracks asthma mortality and hospitalization objectives. The objectives and the target rates are shown in the table to the right.

Objective 24-1. Reduce asthma deaths.		
Objective	Age Group	Target (Rate per million)
24-1a.	Children under 5 years	1.0
24-1b.	Children 5 to 14 years	1.0
24-1c.	Adolescents and adults aged 15 to 34 years	2.0
24-1d.	Adults aged 35 to 64 years	9.0
24-1e.	Adults aged 65 years and older	60.0
Objective 24-2. Reduce hospitalizations from asthma.		
Objective	Age Group	Target (Rate per 10,000)
24-2a.	Children under 5 years	25.0
24-2b.	Children and adults aged 5 to 64 years*	7.7
24-2c.	Adults aged 65 years and older*	11.0

* Age-adjusted to the 2000 U.S. population

Inside this issue: This issue of *California Asthma Facts* focuses on California's progress towards meeting *Healthy People 2010* asthma mortality and hospitalization goals.



Arnold Schwarzenegger, Governor
State of California

S. Kimberly Belshé, Secretary
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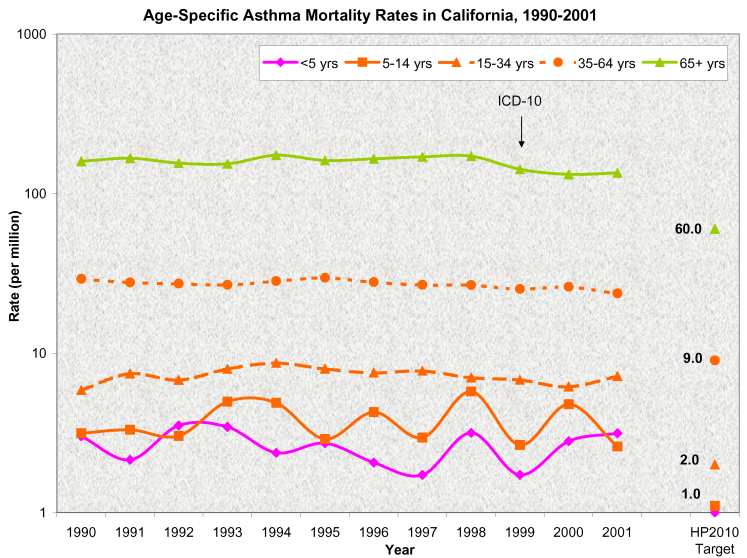
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California Asthma Facts

Asthma Mortality Trends

In 2001, there were 543 deaths due to asthma, slightly more than half of the deaths were among those 65 years and older. The female:male ratio was 3:2. Similar to national trends, boys under five years of age had higher mortality rates than girls, and as the age group increased, women had higher mortality rates than men. Over the past decade, mortality rates among Blacks were three times higher than Whites, Hispanics, and Asians among all age groups. Current mortality rates for California exceed HP2010 Target goals for all ages and are not “better than the best” (having at least two subgroups meet target) among racial/ethnic groups.



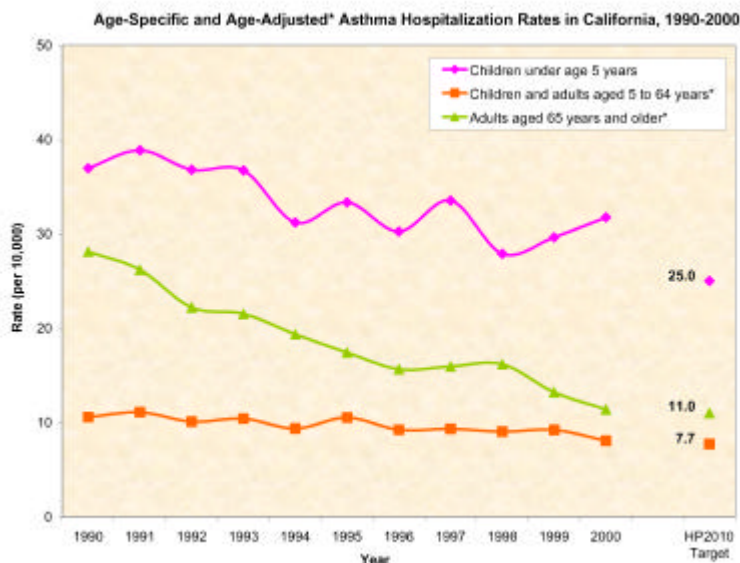
Annual Percent Change in Asthma Mortality Rates in California, 1990-1998¹

	<5 yrs	5-14 yrs	15-34 yrs	35-64 yrs	65+ yrs
OVERALL					
% Change	-4.33	5.80	2.27	-0.80	1.41
95% CI	(-15.09, 7.8)	(-1.25, 13.36)	(-1.19, 5.85)	(-2.54, 0.96)	(0.04, 2.79)
p-value	0.4673	0.1091	0.2016	0.3702	0.0431
BY SEX					
Male	-2.71 (-15.92, 12.57) 0.7118	12.15 (2.74, 22.42) 0.0103	3.25 (-1.47, 8.20) 0.1797	-2.26 (-4.95, 0.51) 0.1090	0.00 (-2.30, 2.35) 0.9987
Female	-2.80 (-21.74, 20.71) 0.7971	-4.73 (-15.14, 6.94) 0.4111	1.11 (-3.90, 6.39) 0.6699	0.22 (-2.04, 2.52) 0.8529	2.19 (0.50, 3.91) 0.0108
BY RACE					
White	1.38 (-18.13, 25.53) 0.9002	0.34 (-11.77, 14.11) 0.9592	-0.61 (-5.53, 4.57) 0.8132	-0.22 (-2.53, 2.14) 0.8526	1.24 (-0.33, 2.84) 0.1216
Black	-12.32 (-27.85, 6.56) 0.1864	14.95 (2.16, 29.33) 0.0206	2.81 (-4.03, 10.14) 0.4295	0.40 (-3.40, 4.36) 0.8382	1.57 (-3.96, 7.41) 0.5854
Hispanic	8.41 (-13.55, 35.96) 0.4844	0.51 (-13.58, 16.90) 0.9472	3.54 (-4.16, 11.85) 0.3773	-5.39 (-10.36, -0.14) 0.0444	1.88 (-3.04, 7.04) 0.4610
Asian/PI	-2.89 (-51.43, 94.19) 0.9340	9.01 (-10.95, 33.44) 0.4031	15.80 (2.22, 31.19) 0.0212	0.24 (-4.95, 5.72) 0.9289	2.12 (-1.95, 6.35) 0.3124

¹ Trend for 1990-1998 because of change in ICD coding in 1999.

Asthma Hospitalization Trends

In 2000, there were 37,096 hospital discharges with a primary diagnosis of asthma. Similar to national trends, boys under five years of age had higher rates than girls, and as the age group increased, women had higher rates than men. Over the past decade, Blacks were hospitalized three times more than Whites, Hispanics, and Asians among those under 65 years of age. Population-based asthma hospitalization rates have been significantly decreasing since 1990 for all age groups in California. Despite decreasing asthma hospitalization rates, California exceeds the HP2010 Target for each of the age groups.



Annual Percent Change in Asthma Hospitalization Rates in California, 1990-2000

	<5 yrs	5-64 yrs	65+ yrs
OVERALL			
% Change	-2.62	-2.38	-7.9
95% CI	(-2.81, -2.43)	(-2.50, -2.27)	(-8.12, -7.69)
p-value	<.0001	<.0001	<.0001
Male	-2.74 (-2.98, -2.51) <.0001	-2.71 (-2.89, -2.52) <.0001	-9.93 (-10.32, -9.55) <.0001
Female	-2.36 (-2.69, -2.03) <.0001	-2.15 (-2.30, -2.01) <.0001	-6.97 (-7.24, -6.70) <.0001
White	-2.73 (-3.06, -2.39) <.0001	-2.77 (-2.94, -2.60) <.0001	-9.79 (-10.06, -9.51) <.0001
Black	-3.15 (-3.57, -2.72) <.0001	-1.17 (-1.41, -0.92) <.0001	-7.66 (-8.38, -6.92) <.0001
Hispanic	-1.43 (-1.76, -1.11) <.0001	-2.51 (-2.75, -2.28) <.0001	-5.5 (-6.07, -4.91) <.0001
Asian/PI	-6.3 (-6.97, -5.62) <.0001	-4.93 (-5.40, -4.45) <.0001	-5.1 (-5.75, -4.44) <.0001

METHODS

Mortality

- California Death Public Use Tape (1990-2001) obtained from the Center for Health Statistics of the California Department of Health Services.
- Included deaths among California residents with asthma as the underlying cause of death [International Classification of Diseases, ninth revision (ICD-9) code "493" and ICD-10 code "J45-J46"].
- Age-specific rate calculations based on 1990-2001 population data from the California Department of Finance.
- Trend analysis was by Poisson regression in SAS version 8 using PROC GENMOD; p-values < 0.05 considered significant.

Hospitalizations

- Hospital discharge data obtained from the California Office of Statewide Health Planning and Development for 1990-2000.
- Computerized records included all hospital discharges in California, except from federal facilities; database contains demographic information on each patient discharge, including age, sex, race, and zip code of residence.
- Included all discharges with asthma as the primary diagnosis [International Classification of Diseases, ninth revision (ICD-9) code "493"].
- Rate calculations based on 1990-2000 population data from the California Department of Finance.
- Age-specific rates calculated for <5 years of age. Age-adjusted rates calculated for the 5-64 year age group (5-14, 15-34, and 35-64 yrs) and for the 65+ year age group (65-74 and 75+ years) using the direct method and based on US 2000 population.
- Trend analysis was by Poisson regression in SAS version 8 using PROC GENMOD; p-values < 0.05 considered significant.

California Asthma Facts

The California Department of Health Services has worked with leading asthma organizations, agencies, and public interest groups throughout the state to develop an integrated plan, *The Statewide Strategic Plan for Asthma in California*, to address the asthma epidemic in California. Please visit the *California Breathing* website for more information:

www.californiabreathing.org

This publication is supported by grant number U59/CCU922471-01-2 from the Centers for Disease Control and Prevention (CDC). Its contents are the sole responsibility of the authors and do not necessarily represent the official views of the CDC.



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Suggested citation: Shaikh N, Von Behren J, Stockman JK, Kreutzer R. "Asthma in California: Meeting the Challenge of Healthy People 2010". *California Asthma Facts, Volume 1, Issue 2*. December 2003. Environmental Health Investigations Branch, California Department of Health Services.



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