UCLA Health Policy Research Brief

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California's Racial and Ethnic Minorities More Adversely Affected by Asthma

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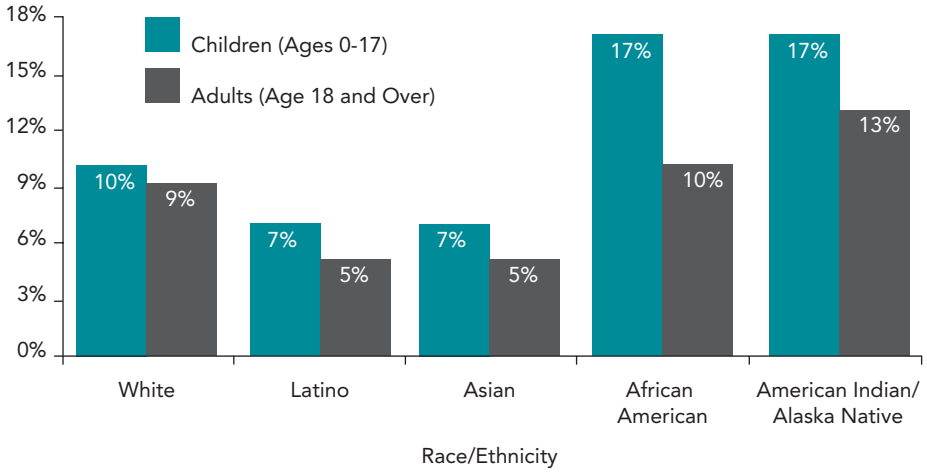
In California, nearly 2.8 million adults and children (8%) had active asthma in 2003. Of Californians with active asthma, 890,000 are children (ages 0-17) and 1.8 million are adults (age 18 and above). The prevalence of active asthma varies by racial and ethnic group, with racial and ethnic minority groups affected more adversely by asthma. They are more likely to go to the emergency department for asthma care, miss more school and work days because of asthma, and have poorer health status. They are also more likely to lack access to health care and to live in conditions associated with asthma exacerbations.

Among California children, the prevalence of active asthma varies by racial and ethnic groups—with the highest prevalence among African Americans (17%) and American Indians/Alaska Natives (17%), followed by whites (10%), Latinos (7%) and Asians (7%; Exhibit 1). Among adults, American Indians/Alaska Natives have the highest prevalence of active asthma (13%), followed by African Americans (10%), whites (9%), Asians (5%) and Latinos (5%). The National data similarly show that both African Americans and American Indians have higher current asthma prevalence rates than non-Hispanic whites.[1]

Exhibit 1

Prevalence of Active Asthma by Race/Ethnicity, California, 2003



Note: Active asthma refers to people who have been diagnosed with asthma and who reported they still had asthma and/or experienced an asthma attack in the past year.

Source: 2003 California Health Interview Survey

The California Endowment

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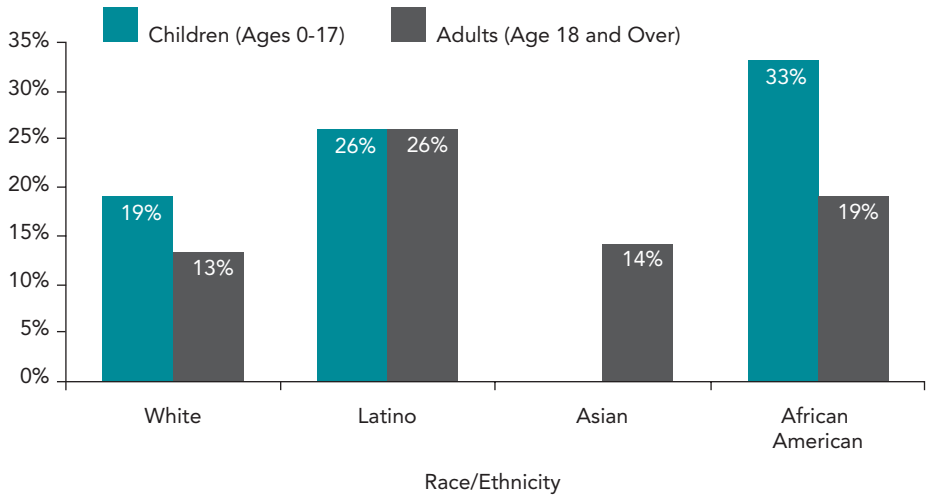
Exhibit 2

Percent with At Least One Emergency Department Visit for Asthma by Race/Ethnicity Among Those with Active Asthma, California, 2003



Note: Estimates for Asian children and American Indian/Alaska Native children and adults are not statistically reliable.
Source: 2003 California Health Interview Survey

Using data from the 2003 California Health Interview Survey (CHIS 2003), this policy brief examines racial/ethnic disparities in the burden of asthma among those with active asthma. In addition, the study focuses on disparities in access to care and exposure to indoor environmental triggers that may contribute to the asthma burden experienced by racial and ethnic minorities. Active asthma refers to people who have been diagnosed with asthma and who reported they still had asthma and/or experienced an asthma attack in the past year. Race/ethnicity is based on respondent reporting single race or on the race/ethnicity with which the respondent most identifies.

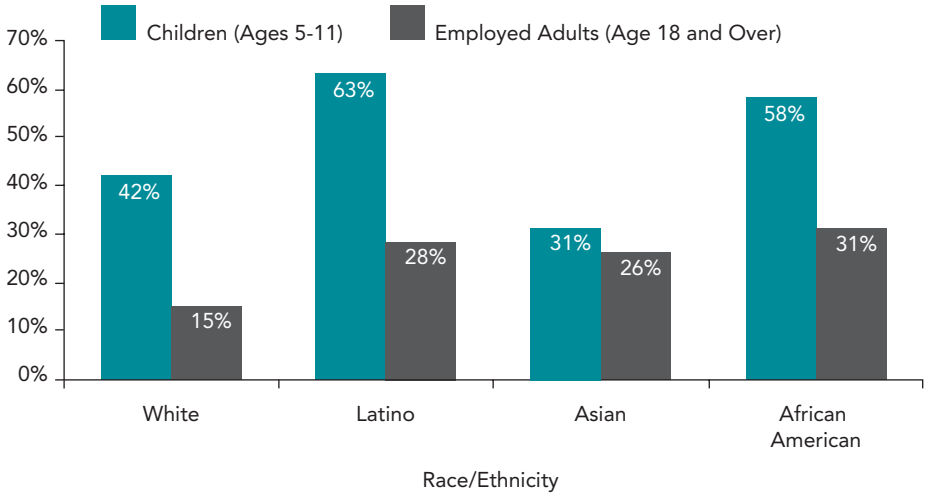
Disparities in the Burden of Asthma

Racial and ethnic minorities in California disproportionately bear the burden associated with active asthma as measured by emergency department (ED) visits for asthma, work or school days missed due to asthma, and overall fair or poor health status.

ED visits for asthma are an indicator of severe asthma exacerbations, which are largely preventable with optimum management of the condition and avoidance of asthma triggers.[2] Among those with active asthma, racial/ethnic minorities are more likely to visit an ED for their asthma. For instance, 33% of African-American children with active asthma had at least one ED visit for their asthma in the previous year compared to 19% of white children with active asthma (Exhibit 2). Compared with whites, a higher percentage of Latino children (26%) also had at least one ED visit for asthma, although the difference is not statistically significant. About 26% of Latino adults and 19% of African-American adults visited the ED at least once for their asthma compared to only 13% of white adults. Nationally, asthma-related ED visits are higher for African Americans than for whites.[3]

Asthma symptoms or attacks can interfere with daily activities, including attending school and going to work. In 2002, American children ages 5-17 missed 14.7 million school days due to asthma, and employed adults (age 18 and above) missed 11.8 million workdays due to their asthma.[4]

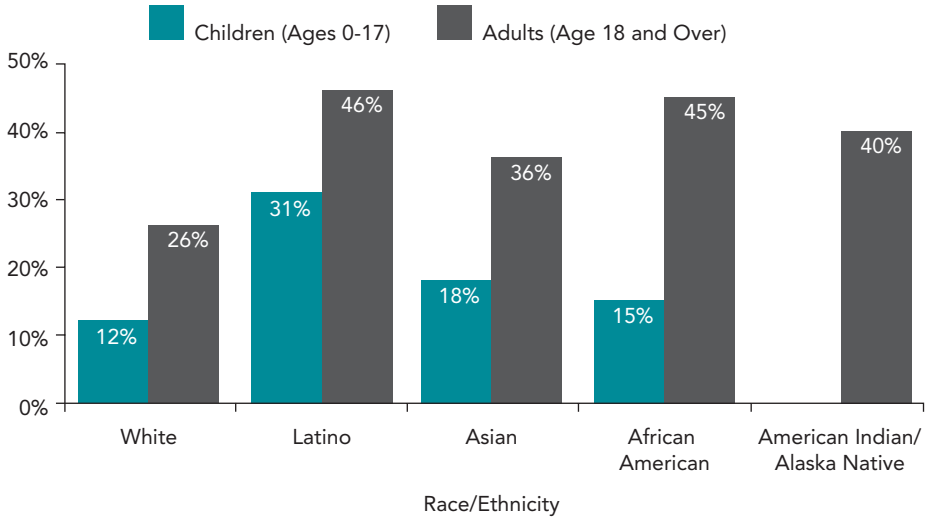
Percent of Children Who Missed At Least One Day of School and Percent of Employed Adults Who Missed At Least One Day of Work Due to Asthma by Race/Ethnicity Among Those with Active Asthma, California, 2003 **Exhibit 3**



Note: Estimates for American Indian/Alaska Native children and adults are not statistically reliable.
Source: 2003 California Health Interview Survey

In California, racial and ethnic differences exist in missed school or work days due to asthma. Among children ages 5-11 with active asthma, 63% of Latino children missed at least one day of school in the past twelve months because of their asthma, significantly higher than the percent of whites (42%) or Asians (31%; Exhibit 3). More than half of African-American children with active asthma missed at least one day of school (58%), but the rate is not significantly higher than that of white children. Among adults with active asthma, the percent of employed Latino and African-American

Percent Reporting Fair or Poor Health Status by Race/Ethnicity Among Those with Active Asthma, California, 2003 **Exhibit 4**



Note: The estimate for American Indian/Alaska Native children is not statistically reliable.
Source: 2003 California Health Interview Survey

adults who missed one or more work days due to their asthma (28% and 31% respectively) is approximately twice as high as their white counterparts at 15%. In addition, more than a quarter of Asians (26%) missed at least one day of work because of asthma, which is again higher than whites.[5]

Self-reported overall health status provides an indication of an individual's perceived well-being. Among those with active asthma, the percent of Latino children with fair or poor overall health status is more than twice as high as white children (31% vs. 12%; Exhibit 4). The rate for African-American children is 15% and for Asian children, 18%. These differences are not statistically different from whites. The percent of Latino adults (46%) and African-American adults (45%) reporting fair or poor health status is also higher than their white counterparts (26%). Asian and American Indian/Alaska Native adults also have high rates of fair or poor health status (36% and 40%, respectively).

Higher rates of ED visits, missed school or working days, and perceived fair or poor overall health status among racial/ethnic minorities with active asthma may reflect inadequate control of asthma. Inadequate asthma control may be related to the disparities in access to primary care and/or exposures to indoor environmental triggers discussed in the following sections.

Disparities in Access to Care

Persons with asthma need consistent and timely access to quality health care to manage the condition. Indicators related to appropriate access to care for those with active asthma include continuous health insurance coverage, having a usual source of medical care, and visiting a doctor at least twice each year.

Health insurance coverage is an essential factor in receiving care to help control asthma. However, among children and adults with active asthma, two in ten Latinos are uninsured all or part of the year (19%) compared to one out of ten whites (11%; Exhibit 5). Latinos also have higher rates of being uninsured than Asians and African Americans.

In addition to health insurance coverage, having a usual source of care is another key component affecting the continuity and quality of care for those with active asthma. Latinos with active asthma are more likely than whites to have no usual source of care (16% vs. 9%; Exhibit 5). A higher percentage of African Americans (13%)

Exhibit 5

Health Care Access Indicators by Race/Ethnicity Among Those with Active Asthma, All Ages, California, 2003

	Uninsured All or Part Year	No Usual Source of Health Care	Fewer than Two Doctor Visits per Year
Race/Ethnicity	**%**	**%**	**%**
White	11%	9%	19%
Latino	19%	16%	25%
Asian	12%	6%	21%
African American	12%	13%	22%
Californians with Active Asthma	**13%**	**11%**	**21%**

Note: Age groups were combined to produce more reliable estimates. Estimates for American Indian/Alaska Native Californians are not statistically reliable.

Source: 2003 California Health Interview Survey

Percent Reporting Smoking and Cockroaches in the Home by Race/Ethnicity Among Those with Active Asthma, All Ages, California, 2003

Exhibit 6

	Smoking in Home	Cochroaches in Home
Race/Ethnicity	**%**	**%**
White	10%	9%
Latino	5%	25%
Asian	–	18%
African American	22%	13%
Californians with Active Asthma	**10%**	**14%**

Note: Age groups were combined to produce more reliable estimates. Estimates for smoking in the home for Asians were not reliable. Estimates for American Indians/Alaska Natives were not reliable.

Source: 2003 California Health Interview Survey

also lack a usual source of care compared to whites, although the difference is not statistically significant.

Regular doctor visits are essential for those with active asthma to assure that asthma control is maintained and that the current therapy is appropriate. The National Heart, Lung, and Blood Institute (NHLBI) recommends that people with asthma see a doctor at least twice a year; however, many Californians with active asthma do not meet this recommendation. The issue is more prevalent among Latinos (25%) than whites (19%; Exhibit 5). Asians (21%) and African Americans (22%) also appear to be less likely than whites to meet this recommendation, although the differences are not statistically significant.

Disparities in Exposure to Indoor Environmental Triggers

Indoor environmental triggers, such as environmental tobacco smoke and cockroaches may exacerbate asthma symptoms, and avoiding these triggers may improve asthma control. Racial and ethnic disparities exist in exposure to these triggers.

Associations have been demonstrated between involuntary exposure to environmental tobacco smoke (ETS), or "passive smoking," and exacerbation and development of asthma, especially among children.[6] African Americans with active asthma are twice as likely as whites (22% vs. 10%) to report being exposed to tobacco smoke in the home (Exhibit 6). By contrast, only 5% of Latinos have someone smoking at home some days or everyday, significantly lower than whites.

A number of indoor biological agents, such as cockroaches and molds, can exacerbate asthma. Some researchers have concluded that people of color are more likely than others to live in substandard housing and experience disproportionate exposure to these indoor triggers.[7] Latino and Asian adults and children with active asthma (25% and 18%, respectively) are more likely to report seeing cockroaches inside their homes than whites (9%; Exhibit 6). African Americans (13%) also appear to be more likely than whites to see cockroaches inside their homes, although the differences are not statistically significant.

Discussion and Policy Recommendations

More than 2.7 million Californians are afflicted with active asthma. Racial and ethnic minority groups are not always over-represented in the prevalence of active asthma. However, among those with active asthma, racial and ethnic minority groups are more likely to be adversely affected by the

disease. Specifically, they are more likely to have ED visits for asthma, missed school or work days due to asthma, and poorer overall self-perceived health status. Potential explanations for the disproportionate burdens of asthma in these populations include their relative lack of access to health care, as measured by health insurance status, usual source of care, and having fewer than two doctor visits in the previous year. Additionally, racial and ethnic minority groups are more likely to be exposed to potential indoor triggers, such as environmental tobacco smoke and cockroaches inside the home.

The data presented in this brief suggest that racial and ethnic disparities in the burden of asthma exist in California. Asthma is a complex disease affected by many factors. The factors examined may interact with one another and widen the racial and ethnic gaps among Californians with active asthma. In addition to the factors mentioned, other factors may contribute to racial and ethnic disparities in asthma. For instance, overall socio-economic status,[8] living in a neighborhood with heavy traffic,[9] and experiencing delays in care[10] may all contribute to ED visits for asthma. Racial and ethnic minority communities also experience higher than average exposure to air pollution.[11] These disparities may be even greater than suggested by the analyses in this brief. Some studies have indicated that presenting aggregated data for Asians and Latinos may mask issues in some Latino and Asian-American ethnic groups. For example, Puerto Ricans and Filipinos tend to have higher asthma rates than other ethnic groups.[12, 13]

To eliminate racial and ethnic disparities in the burden of asthma in California, efforts should be made on the clinical, policy and public health levels. These efforts should include policies and programs designed to improve access to health care, especially culturally-competent care, and to reduce environmental triggers and exposures to these triggers for racial ethnic minority groups at the state and local levels. Specific recommendations include:

- **Improve access to health care.** Health insurance coverage with appropriate benefits is essential for people with asthma because it is related to both timely access to appropriate care and continuity of care. Outreach efforts are needed in racial and ethnic minority communities to assure enrollment into appropriate programs such as MediCal and Healthy Families for those who are eligible. Further expansions of health care coverage are also needed to assure that adults and children with asthma have access to care when needed, as well as regular follow-up visits. For example, Latinos are less likely to have access to employment-based health insurance or any other coverage.[14] In addition, access to culturally- and linguistically-appropriate care is essential in enabling many racial and ethnic minorities to receive high-quality care. Community-based, culturally-appropriate interventions that assure adequate education about asthma management, along with efforts to improve access to culturally-competent health care are needed to reduce the disproportionate burden of asthma among racial and ethnic groups.[15, 16]

- **Reduce exposure to environmental triggers.** Environmental triggers such as air pollutants (ozone and particulate matter), tobacco smoke, dust mites, animal dander, cockroaches and molds play a role in the development and exacerbation of asthma.[17] Local, state and national policies are needed to further reduce Californians' exposure to environmental triggers in the outdoor air, as well as in homes, schools, work places and child care centers. Such policies should pay particular attention to

disproportionate exposures that put California's racial and ethnic minority groups at increased risk. Although people spend much of their time indoors, indoor triggers have only recently appeared on the policy agenda.[18] On January 26, 2006, the California Air Resource Board identified environmental tobacco smoke (ETS) as a Toxic Air Contaminant (TAC) as mandated by Assembly Bill 1807. Following this identification, further research and action plans are needed to determine how to help Californians curtail indoor triggers, especially for racial and ethnic minorities who are sensitized and/or at increased risk of exposure.

Data Source

All statements in this report that compare rates for one group with another group reflect statistically significant differences ($p<0.05$) unless otherwise noted. The findings in this brief are based on data from the 2003 California Health Interview Survey (CHIS 2003). CHIS 2003 completed interviews with over 42,000 households, including adults, adolescents and children, drawn from every county in the state. Interviews were conducted in English, Spanish, Chinese (both Mandarin and Cantonese), Vietnamese and Korean.

The findings included in this policy brief are subject to some limitations. First, the asthma estimates are dependent on having physician-diagnosed asthma. This may result in an underestimation of the prevalence of active asthma because some people with asthma may not have received a diagnosis. Second, the findings presented are based on self-reported, cross-sectional data. It is possible that respondents' self-reports were influenced by a recall bias. As a cross-sectional survey, caution should be taken in drawing conclusions about causal relationships based on statistical relationships found in this study.

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Notes

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