Summary:

Los Angeles County Health Survey

- Overall, an estimated 6% of children (or 173,000 children) in Los Angeles County had asthma in 1999-2000.

- The prevalence of asthma was more than two times higher among African-American children (16%) than among white (7%), Asian/Pacific Islander (6%), and Latino (4%) children.

- Among children with asthma, 53% had limited physical activity because of their disease, including 61% of those 6 to 17 years of age.

- The percentage of children with asthma-related activity limitation was highest among those living below 100% of the federal poverty level (70%) and lowest among those living above 300% of poverty (27%).

- Among children with asthma, 60% of those <5 years old and 48% of those aged 6 to 17 years had to visit an emergency room or urgent care center for their asthma in the past 12 months.

- Among children with asthma, those exposed to environmental tobacco smoke (ETS) in the home were more likely to have asthma symptoms that limited their physical activity (70%) than those not exposed to ETS (52%).
Asthma is the most common chronic illness and a leading cause of disability in children. When not adequately treated, asthma can limit children’s activities and lead to serious complications, including pneumonia, impaired growth and development, and death. Among children 14 years and younger in Los Angeles County, asthma accounted for nearly 40,000 hospitalizations during the period 1995–1997. Hospitalization rates were more than three times higher among African-American children than those in other racial/ethnic groups.

The prevalence of childhood asthma in the United States has nearly doubled since 1980. The reasons for this increase are not well understood. Although little is known about how to prevent the onset of asthma in susceptible children, much can be done to prevent and reduce asthma-related symptoms (such as wheezing, cough, and shortness of breath) among those with the disease. For this reason, access to high-quality health care services is extremely important for those with asthma. With effective treatment and efforts to limit environmental exposures (e.g., tobacco smoke, dust mites, and animal dander) that can trigger symptoms, the vast majority of children with asthma are able to participate in all the normal activities of childhood, including sports and other recreation.

This report presents data on the prevalence of asthma among children (less than 18 years old) in Los Angeles County. The findings are based on information collected on a random sample of 6,016 children in the 1999–2000 Los Angeles County Health Survey. Parents were asked in the survey if their children had ever been diagnosed with asthma and,
if yes, whether the children had episodes of asthma or asthma attacks in the past 12 months. Children were classified as having asthma if their parents responded affirmatively to both questions.4

Asthma Prevalence.

Overall, an estimated 6% of children (or 173,000 children) in the county had asthma in 1999-2000.

The prevalence of asthma was 7% among males and 5% among females.

Asthma prevalence was 7% among children 6 to 17 years old and 5% among those 5 years of age and younger.

The prevalence was more than two times higher among African-American children (16%) than white (7%), Asian/Pacific Islander (6%), and Latino (4%) children (Figure 1).

![Figure 1. Prevalence of Asthma Among Children by Race/Ethnicity, Los Angeles County, 1999–2000](image)

4. This definition is consistent with the uniform case definition of self-reported (or parent-reported) asthma adopted by the Council of State and Territorial Epidemiologists.
5. Children were classified as having limited physical activity if the parent reported that asthma limited the child’s activity sometimes, most of the time, or always.

6. The results for Asian/Pacific Islander children should be viewed with caution because the sample was small (n=24).

Impact of Asthma on Level of Physical Activity.

Among children with asthma, 53% had limited physical activity because of their disease, including 61% of those 6 to 17 years of age.5

The percentage of asthmatic children with limited physical activity was higher among African-Americans (63%) and Latinos (62%) than whites (36%) and Asians/Pacific Islanders (28%).6

The percentage with asthma-related activity limitation was highest among those living below 100% of the federal poverty level (70%) and lowest among those living above 300% of poverty (27%) (Figure 2).

Use of Health Care Services.

89% of children with asthma had health insurance, 95% had a regular source of health care, and 93% had medication for their asthma.

5. Children were classified as having limited physical activity if the parent reported that asthma limited the child’s activity sometimes, most of the time, or always.

6. The results for Asian/Pacific Islander children should be viewed with caution because the sample was small (n=24).
Among asthmatic children, 60% of those less than 5 years old and 48% of those aged 6 to 17 years had to visit an emergency room or urgent care center for their asthma in the past 12 months.

The percentage of asthmatic children who needed care at an emergency room or urgent care center was higher among African-Americans (68%) and Latinos (64%) than whites (25%) and Asians/Pacific Islanders (33%) (Figure 3).
Exposure to Environmental Tobacco Smoke.

- Overall, an estimated 8% of children in the county (or 215,000 children) were exposed to environmental tobacco smoke (ETS) in the home on a regular basis.

- The prevalence of asthma was 8% among children exposed to ETS in the home compared to 6% among children not exposed to ETS in the home (this difference was not statistically significant).

- Among children with asthma, those exposed to ETS in the home were more likely to have asthma symptoms that limited their physical activity (70%) than those not exposed to ETS (52%).

Discussion

The results of the survey indicate that approximately 6% of children in Los Angeles County have asthma, comparable to the prevalence of childhood asthma reported nationally (5.3%). The prevalence among African-American children in the county (16%) is markedly higher than the rate reported for African-American children nationally (6.8%). The reasons for this disparity are unclear and highlight the need for additional studies to identify the factors contributing to the higher asthma prevalence among African-American children in the county. The lower asthma prevalence observed among Latino children (4%) may reflect reduced access to health care services in this population and, therefore, should be viewed with caution.

The findings also indicate that among children in the county with asthma, many suffer symptoms severe enough to limit their physical activity and require emergency room or other urgent health care visits. These markers of more severe asthma were reported more frequently among African-American, Latino, and low-income children, suggesting that focused efforts are needed in the county to improve access to medical care and other support services (e.g., psychosocial support services, asthma education, and instruction on the use of inhalers and other asthma medications) for these populations. Given the potential morbidity associated with asthma and the large number of interventions available to reduce its severity, these services should be provided by, or be closely linked to, a primary health care provider who can ensure continuity of care and optimal disease management.

Public health interventions are also important for addressing the environmental factors that predispose to asthma. For example, although levels of outdoor air pollution have declined substantially in the Los Angeles basin over the past several decades, air quality remains among the poorest of any metropolitan area in the country. A number of research studies have demonstrated a link between outdoor air pollution and the severity of symptoms among those with asthma, suggesting that continued efforts to improve air quality in the county will reduce asthma-related morbidity and mortality. The importance of indoor air quality on both asthma incidence and severity is also well documented.

The findings of the present survey are consistent with a number of other studies that have demonstrated an association between exposure to environmental tobacco smoke and childhood asthma, highlighting the importance of ongoing efforts to reduce smoking among adults with children. Exposures to other environmental asthma triggers (such as dust, mold, mildew, and cockroaches) can also be reduced by providing community education and addressing substandard housing conditions in the county.

The survey results are subject to at least two limitations. First, because the data are based on parent reports, children with unrecognized asthma are not included in the prevalence estimates. Studies have found that as many as 15% of children in urban settings may have asthma symptoms that are undiagnosed, suggesting that the results presented in this report should be

viewed as minimum estimates of the burden of asthma in the county’s child population. If the assumption is made that uninsured children and those covered by MediCal or Healthy Families are just as likely to have asthma as those with private insurance, the estimated prevalence is increased to 7% (or 200,000 children). A second limitation is that the survey did not include children who are homeless or living in households without telephones, estimated to comprise at least 3% of the county’s total child population. Assuming 7% of these children also have asthma, the estimated number of children in the county with asthma is increased to 206,000.

In summary, the findings in this report indicate that childhood asthma is a significant public health problem in Los Angeles County, especially in the African-American population. The findings also suggest that many children with asthma may not be receiving adequate medical care and other support services to control their symptoms, resulting in activity limitations and the need for emergency room and other urgent care services. Efforts are needed to improve access to health care and other support services for children with asthma, and to address modifiable environmental factors that contribute to asthma-related symptoms.

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