LOS ANGELES COUNTY DEPARTMENT OF PUBLIC HEALTH

Breathless: Impact of Asthma on Children in Los Angeles County

Every Child Deserves Access to Quality Asthma Care

Asthma is a chronic respiratory condition that affects the lungs, making it difficult to breathe and potentially leading to severe health complications if not properly managed.[1] In Los Angeles County, asthma continues to pose a significant public health challenge, particularly among children.

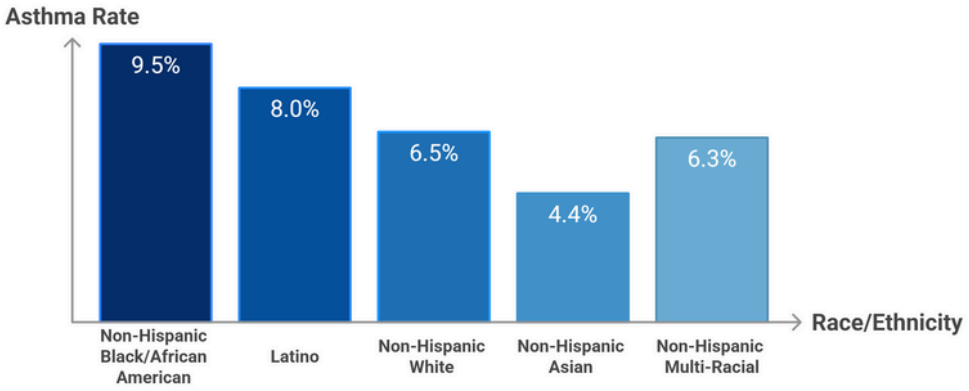
In 2023, the asthma prevalence rate among children (0 to 17 years old) in Los Angeles County was 7.3%. This County-wide rate varied across racial and ethnic groups, with Black/African American children experiencing the highest rate at 9.5%, followed by children of Latino (8.0%); Non-Hispanic Multi-racial (6.3%); Non-Hispanic White (6.5%); and Non-Hispanic Asian (4.4%) ancestry (Figure 1).

Despite ongoing disparities, this represents a substantial improvement compared to a decade ago, when the percentage of Black/African American children were nearly three times higher (24.9%) than those of the next most affected group.[2]

Higher Asthma Burden In Children in Low-Income Households

In Los Angeles County, children living in households with incomes below the federal poverty level (FPL) experience higher rates of asthma compared to their peers from higher-income households (Figure 2).

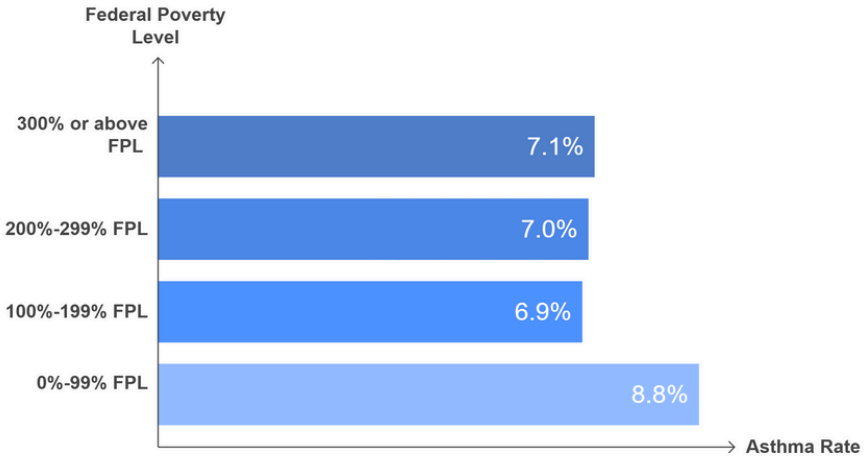
Figure 1.
Asthma Rates Among Children by Race/Ethnicity in Los Angeles County



NH = Non-Hispanic (excludes any mention of Hispanic). Latino includes respondents of any race.
For purposes of confidentiality, data on Native Hawaiian/Pacific Islander and American Indian/Alaska Native was less than 12 and not reported.

Data Source: Los Angeles County Health Survey (LACHS), 2023

Figure 2.
Percent of Children (0 to 17 years old) With Asthma by Household Income



U.S. Census 2022 Federal Poverty Level (FPL) thresholds for a family of four (2 adults, 2 dependents) correspond to annual incomes of $27,750 (100% FPL), $55,500 (200% FPL), and $83,250 (300% FPL). [These thresholds were the values at the time of survey interviewing.]

Data Source: Los Angeles County Health Survey (LACHS), 2023

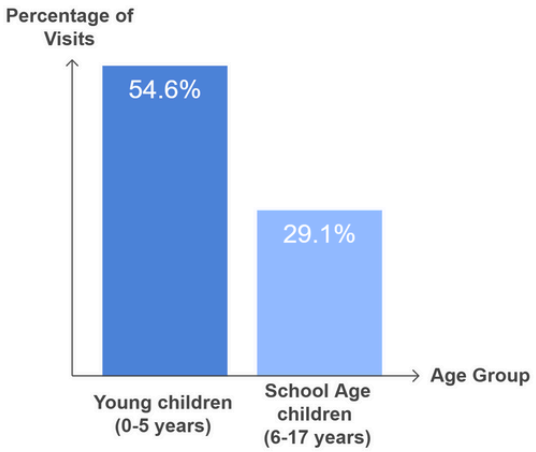
Use of Medical Services Among Children with Asthma

Younger Children At Higher Risk for Emergency Room (ER) or Urgent Care Visit

It is not uncommon for parents to seek care at an ER for a child's uncontrollable asthma attack. Young children were nearly twice as likely to be taken to the ER or Urgent Care versus older children (Figure 3). Latino and Black/African American children reported higher rates of ER or Urgent Care use compared to other groups. Improved asthma control through primary care use can prevent the use of ER and Urgent Care services. (Figure 4)

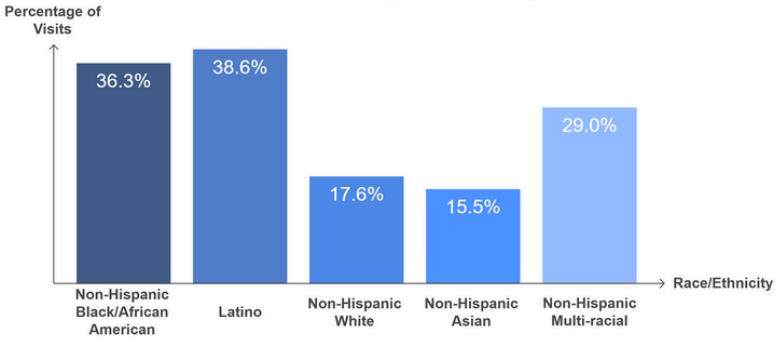
Families from diverse communities who reside in neighborhoods with minimal healthcare facilities may face longer wait times for appointments, and therefore may perceive the ER or Urgent Care as their most accessible healthcare option. Utilizing the ER or Urgent Care as a substitute for regular health care is not ideal, given both options tend to be more expensive, are not designed to provide ongoing care, and may lack preventative care recommendations patients receive from a primary care provider.

Figure 3.
ER or Urgent Care Visits Among Children with Asthma by Age Group



Data Source: Los Angeles County Health Survey (LACHS), 2023

Figure 4.
ER or Urgent Care Visits Among Children with Asthma by Race/Ethnicity



Since young children rely heavily on caregivers for daily asthma care and treatment, it is essential that all caregivers are equipped to recognize the signs and symptoms of acute asthma attacks, administer medications effectively, and ensure consistent adherence to prescribed medication regimens.

Culturally appropriate education and supportive services are essential for caregivers to navigate health systems to manage a young child's asthma care. [3]

NH = Non-Hispanic (excludes any mention of Hispanic). Latino includes respondents of any race.
For purposes of confidentiality, data on Native Hawaiian/Pacific Islander and American Indian/Alaska Native was less than 12 and not reported.
Some estimates are statistically unstable (relative standard error >30%) and therefore may not be appropriate to use for planning or policy purposes.
Data Source: Los Angeles County Health Survey (LACHS), 2023

Impact of Asthma on Physical Activity and School Days

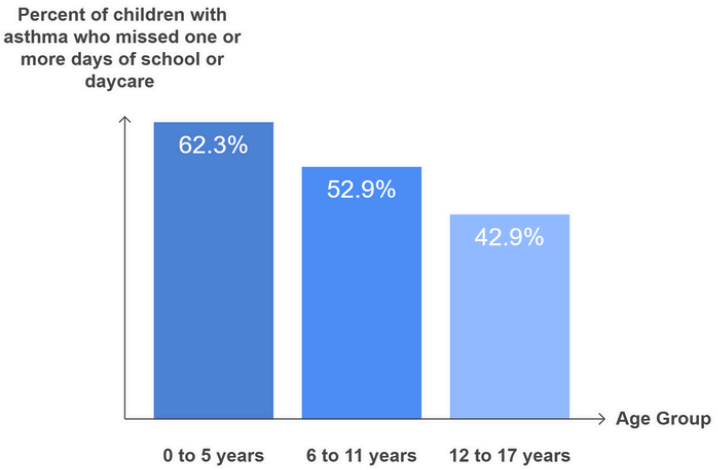
Missed School/Daycare Days Highest Among Children <5 years old with Asthma

Children under five with asthma are more likely to experience absences from school or daycare compared to school age children and adolescents (Figure 5).

Missed days from school or daycare affect not only the child, but also the caregiver and the broader learning community. Frequent absences can be a challenge especially for very young children who depend on routines, are developing essential social skills, and may disrupt medication regimens during the daytime when children are most active.[4]

Missed days can result in loss of income for working caregivers, and fragments early childhood learning opportunities linked to healthy development both physically and socially.

Figure 5.
Percent of children with asthma who missed one or more days of school or daycare



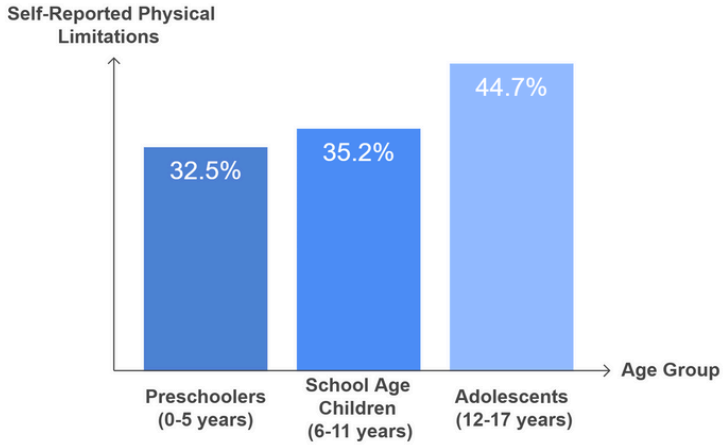
Data Source: Los Angeles County Health Survey (LACHS), 2023

Self-Reported Physical Activity Limitations Highest Among Adolescents with Asthma

Among children diagnosed with asthma, adolescents are more likely to self-report physical limitations compared to school age and young children (Figure 6). This may be related to one or more factors including: having asthma; failure to carry medications to school or sporting events; fears of exacerbating asthma symptoms while away from home; or reporting bias by parents given a growing trend toward a sedentary lifestyle due to increased screen time among teens.[5]

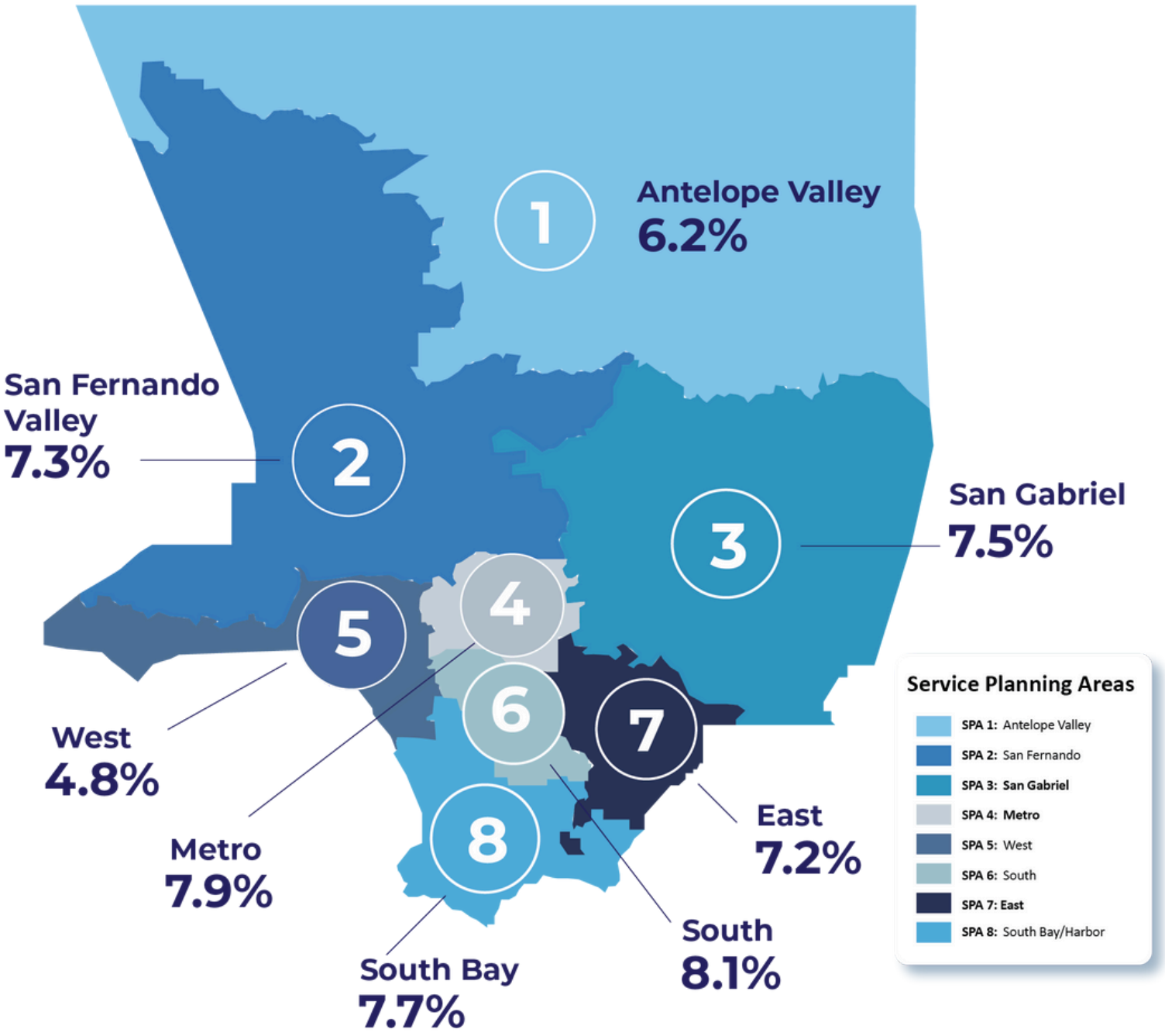
Reduced physical activity in children can have a range of secondary negative effects, as regular exercise supports healthy growth/development, fosters peer socialization, promotes better sleep, enhances cardiovascular health, and aids in maintaining a healthy weight.

Figure 6
Self-Reported Physical Limitations In Children with Asthma by Age Group



Data Source: Los Angeles County Health Survey (LACHS), 2023

Childhood Asthma Rates Across Service Planning Areas (SPAs)



Data Source: Los Angeles County Health Survey (LACHS), 2023

Conclusions

Asthma is a prevalent childhood condition, significantly affecting children's quality of life at home, in school and during play.

Disparities persist in terms of asthma-related emergency room visits, urgent care usage, school absenteeism, and limitations on physical activities. These disparities remain pronounced across racial, ethnic, and socioeconomic groups, with Black/African American and Latino children continuing to experience disproportionately higher impacts, despite the overall decade-long decline in asthma prevalence.

While the data presented in this report were not adjusted for race and ethnicity, observed patterns suggest that certain racial and ethnic groups may be disproportionately impacted by childhood asthma. Additionally, data for Asian and Pacific Islander (API) and American Indian/Alaskan Native (AI/AN) populations were not available, limiting our ability to fully assess disparities across all communities. These gaps highlight the need for further analysis that includes demographic adjustments and improved data collection to better understand and address health inequities.

Asthma prevalence also varies significantly by geographic location within Los Angeles County, ranging from 4.8% to 8.1% across different Service Planning Areas (SPAs). These geographic disparities underscore that childhood asthma is influenced not merely by individual behaviors or family decisions but largely by systemic inequities, including historical disinvestment in clean air initiatives and unequal access to less polluted living environments for communities of color.

Additionally, children from low-income households consistently have higher asthma rates —a pattern reflecting broader state and national trends.

According to 2023 data, young children aged 0 to 5 years represent a substantial proportion of asthma-related visits to emergency rooms and urgent care facilities. Caregivers play a critical role in mitigating asthma impacts by implementing preventive strategies and ensuring consistent and proper medication management.

A myriad of additional factors may impact an individual's risk for asthma, including exposure to second-hand smoke, living in proximity to heavily trafficked roads, indoor and outdoor air quality, exposure to mold or other allergens, physical activity level, emotional stress, and air temperature. Health care and other providers should consider and investigate all potential causes of asthma while formulating a treatment plan. Ensuring access to asthma medications at home, in daycare, or at school is vital for asthma management. However, reducing the burden of asthma in low-income households also means improving the conditions where children and families live, learn, eat, play, and pray.

Recommendations and Resources

What Families Need for Asthma Control:

· A clear, easy-to-understand asthma action plan that is culturally and age appropriate. Access to daily control medications at home and in daycare/school settings.
· Health providers to be active partners in asthma care with culturally appropriate materials and wraparound supportive services.
· Childcare centers, schools and school districts to have written protocols to share with caregivers on rules for oversight of children with asthma and/or those experiencing an asthma attack.

What Health Providers Can Do:

· Keep up to date on the latest guidelines for asthma treatment.
· Address known gaps in consistent access to primary care for asthma and co-develop solutions with families on how to minimize emergency room use as a primary option to seek care.
· Routinely offer culturally appropriate education about indoor and outdoor asthma triggers and how to reduce exposure to them.

What Childcare Centers, Schools and School Districts Can Do:

· Train staff in daycare and school setting to administer or assist with approved medications.
· Provide families with access to daily control medication protocols in daycare/school settings to handle asthma attacks and/or assist with administering medications.

What Air Quality Advocates and Decision Makers Can Do:

· Develop and disseminate culturally appropriate education and advocacy about indoor and outdoor asthma triggers and how to reduce exposure to them via multiple media channels.

Additional asthma support and information can be obtained at the following DPH Wellness Centers:

· **Antelope Valley Wellness Community (SPA 1)**
http://publichealth.lacounty.gov/chs/avwc/
· **North Hollywood Wellness Community (SPA 2)**
http://publichealth.lacounty.gov/chs/SPA2/index.htm
· **Pomona Wellness Community (SPA 3)**
http://publichealth.lacounty.gov/chs/SPA3/index.htm
· **Hollywood-Wilshire Wellness Community (SPA 4)**
http://publichealth.lacounty.gov/chs/SPA4/index.htm
· **West Los Angeles Wellness Community (SPA 5)**
http://publichealth.lacounty.gov/chs/SPA5/index.htm
· **MLK Community Healing and Trauma Prevention Center (SPA 6)**
http://publichealth.lacounty.gov/chs/SPA6/index.htm
· **Whittier Wellness Community (SPA 7)**
http://publichealth.lacounty.gov/chs/SPA7/index.htm
· **Curtis Tucker Center for Community Wellness (SPA 8)**
http://publichealth.lacounty.gov/chs/SPA8/index.htm

Asthma Coalition of Los Angeles County (ACLAC)

Who is the Asthma Coalition of Los Angeles County (ACLAC)

The Asthma Coalition of Los Angeles County (ACLAC) is a multidisciplinary coalition of experts from community-based organizations, advocacy groups, universities, government entities, school districts, environmental groups, health plans, hospitals, and clinics in Los Angeles County. For over a decade, ACLAC has been a collective, powerful voice for policy and systems change to prevent, minimize, and manage the burden of asthma. The Coalition's goals are to increase access to and improve quality of asthma clinical care; improve indoor air quality in homes; improve asthma management in schools; and improve outdoor air quality. In addition, through each of these goals, the Coalition strives to address racial/ethnic and socioeconomic disparities related to asthma.

How does someone join ACLAC?

For more information, visit http://publichealth.lacounty.gov/mch/CAH/Asthma.htm or email ALCAC Program Director, Marghot Carabali at mcarabali@ph.lacounty.gov

ACLAC Steering Committee

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References & Acknowledgements

1. Asthma and Allergy Foundation of America, (2020). [Asthma Disparities in America: A Roadmap to Reducing Burden on Racial and Ethnic Minorities]. Retrieved from aafa.org/asthmadisparities.

2. Los Angeles County Department of Public Health, Office of Health Assessment and Epidemiology, Breathing Easy? Child Asthma in Los Angeles, May 2014.

3. Margolis R, Bellin MH, Dababnah S, Sacco P and Butz A. Psychometric Evaluation of the Medication Adherence Report Scale in Caregivers of Low-Income, Urban, African American Children with Poorly Controlled Asthma. Journal of Asthma. 2022, 59(2): 386-394.

4. Lu KD and Forno E. Exercise and Lifestyle Changes in Pediatric Asthma. Current Opinions in Pulmonary Medicine. 2020, 26(1):103-111.

5. Kannoth S, Chung SE, Tamkloe KD, Albrecht SS, Azan A., Chambers EC, Sheffield PE, Thompson A, Baidai JAW, et al, Lovinsky-Desir S and Stingone JA. Neighborhood Environmental Vulnerability and Pediatric Asthma Morbidity in US Metropolitan Areas. Journal of Allergy & Clinical Immunology, 2023, 152(2);378-385.e2.

6. Pate CP, Qin X, Johnson C, and Zahran HS. Asthma Disparities among U.S. Children. Journal of Asthma. 2023, 60 (12) 2214-2223.

7. Grant T, Croce E and Matsui EC. Asthma and the Social Determinants of Health. Annals of Allergy Asthma and Immunology. 2022;128(1):5-11.

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The Division of Maternal, Child and Adolescent Health also recognizes the valuable contributions made by the Los Angeles County Office of Health Assessment and Epidemiology for assistance with the data tables.
Inquiries regarding this data in this report should be directed to: MCAH-DataReqs@ph.lacounty.gov

Technical Notes on Supplemental Data Tables

The data estimates (pages 1-4, 10 & 11) presented in this report are based on data collected from a random sample of 7,391 Los Angeles County children, representative of the child population in Los Angeles County. Data were reported by an adult sufficiently knowledgeable about the health and daily routines of the child.

In the Supplemental data tables, the 95% confidence intervals (CI) represent the variability in the estimate due to sampling; the actual prevalence in the population, 95 out of 100 times sampled, would fall within the confidence interval range provided.

Race and ethnicity is recoded based on the Los Angeles County Department of Public Health Standard of Practice for collecting and reporting race and ethnicity data.

NH = Non-Hispanic (excludes any mention of Hispanic).
Latino includes respondents of any race.

*The estimate is statistically unstable (relative standard error >30%) and therefore may not be appropriate to use for planning or policy purposes.

"-" For purposes of confidentiality, cell data of less than 12 are not reported.

1. "Current asthma" describes the percentage of people who have ever been diagnosed with asthma by a health care provider AND report they still have asthma and/or had an asthma episode or attack within the past 12 months.

2. Based on U.S. Census 2022 Federal Poverty Level (FPL) thresholds for a family of four (2 adults, 2 dependents) correspond to annual incomes of $27,750 (100% FPL), $55,500 (200% FPL), and $83,250 (300% FPL). [These thresholds were the values at the time of survey interviewing.]

Data Source: **2023 Los Angeles County Health Survey; Office of Health Assessment and Epidemiology, Los Angeles County Department of Public Health**

Table 1.
Percent of Children (0 to 17 Yrs) With Current Asthma by Selected Indicators | Los Angeles County Residents, 2023

	Percent (%)	95% CL	Estimated #
Los Angeles County	7.3%	6.5 - 8.2	143,000
GENDER			
Male	8.2%	7.0 - 9.4	82,000
Female	6.4%	5.3 - 7.5	60,000
AGE GROUP			
0-5	4.5%	3.1 - 5.9	25,000
6-11	8.2%	6.7 - 9.7	53,000
12-17	8.7%	7.4 - 10.0	65,000
RACE/ETHNICITY (SEE TECHNICAL NOTES, PAGE 9)			
Latino	8.0%	6.8 - 9.1	93,000
Non-Hispanic, White	6.5%	4.4 - 8.5	21,000
Non-Hispanic, Black/African American	9.5%	6.4 - 12.6	13,000
Non-Hispanic, Asian	4.4%	2.5 - 6.3	9,000
Non-Hispanic, Hawaiian/Pacific Islander	-	-	-
Non-Hispanic, American Indian or Alaska Native	-	-	-
Non-Hispanic, Multi-Racial or Some Other Race	6.3%	3.5 - 9.1	6,000
FEDERAL POVERTY LEVEL (FPL)			
0-99% FPL	8.8%	7.0 - 10.6	34,000
100-199% FPL	6.9%	5.3 - 8.5	39,000
200-299% FPL	7.0%	5.0 - 9.0	19,000
300% or Above FPL	7.1%	5.8 - 8.4	51,000
SERVICE PLANNING AREA			
1 - Antelope Valley	6.2%	4.0 - 8.4	7,000
2 - San Fernando	7.3%	5.1 - 9.4	31,000
3 - San Gabriel	7.5%	5.8 - 9.1	24,000
4 - Metro	7.9%	5.0 - 10.7	13,000
5 - West	4.8%	2.5 - 7.0	4,000
6 - South	8.1%	6.0 - 10.2	20,000
7 - East	7.2%	5.3 - 9.1	20,000
8 - South Bay	7.7%	5.3 - 10.1	24,000

Data Source: Los Angeles County Health Survey (LACHS), 2023

Table 2.
Percent of Children (0 to 17 Yrs) With Current Asthma Whose Physical Activity Was Limited, Who Missed One Day or More of School or Daycare, or Who Went to the ER or Urgent Care in the Past Year by Selected Indicators
Los Angeles County Residents, 2023

	Physical Activity Limitation	Missed School or Daycare	Went to ER or Urgent Care
Los Angeles County	39.0%	49.7%	33.5%
GENDER			
Male	37.9%	49.8%	32.5%
Female	40.1%	49.8%	35.2%
AGE GROUP			
0-5	32.5%	62.3%	54.6%
6-11	35.2%	52.9%	38.4%
12-17	44.7%	42.9%	21.6%
RACE/ETHNICITY (SEE TECHNICAL NOTES, PAGE 9)			
Latino	43.6%	54.0%	38.6%
Non-Hispanic, White	24.1%	37.0%	17.6%*
Non-Hispanic, Black/African American	32.5%	54.7%	36.3%*
Non-Hispanic, Asian	39.5%	27.9%*	15.5%
Non-Hispanic, Hawaiian/Pacific Islander	-	-	-
Non-Hispanic, American Indian or Alaska Native	-	-	-
Non-Hispanic, Multi-Racial or Some Other Race	28.6%*	46.2%	29.0%
FEDERAL POVERTY LEVEL (FPL)			
0-99% FPL	59.8%	60.2%	44.4%
100-199% FPL	36.4%	50.0%	33.9%
200-299% FPL	40.9%	57.2%	36.6%
300% or Above FPL	26.7%	40.6%	25.0%
SERVICE PLANNING AREA			
1 - Antelope Valley	53.5%	57.1%	32.0%
2 - San Fernando	44.3%	58.5%	43.1%
3 - San Gabriel	37.3%	48.3%	29.4%
4 - Metro	40.0%	53.0%	35.7%
5 - West	17.7%	54.2%	
6 - South	43.4%	41.5%	27.2%
7 - East	36.4%	43.8%	31.3%
8 - South Bay	32.1%	47.5%	36.9%

Data Source: Los Angeles County Health Survey (LACHS), 2023