



Home > Data by Topic > Asthma >

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Asthma Hospitalization Rate, by Age Group

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Location: 42 selected Year(s): 2022 Age Group: All

California	Rate per 10,000
Ages 0-4	17.3
Ages 5-17	5.9
Total for Ages 0-17	8.9

Alameda County	Rate per 10,000
Ages 0-4	16.4
Ages 5-17	3.6
Total for Ages 0-17	7.1

Alpine, El Dorado, Inyo, and Mono Counties	Rate per 10,000
Ages 0-4	11.9
Ages 5-17	5.9
Total for Ages 0-17	7.5

Amador, Calaveras, Mariposa, and Tuolumne Counties	Rate per 10,000
Ages 0-4	S
Ages 5-17	S
Total for Ages 0-17	S

Butte County	Rate per 10,000
Ages 0-4	10.6

Butte County	Rate per 10,000
Ages 5-17	5.7
Total for Ages 0-17	7.0

Colusa, Glenn, and Lake Counties	Rate per 10,000
Ages 0-4	S
Ages 5-17	S
Total for Ages 0-17	6.5

Contra Costa County	Rate per 10,000
Ages 0-4	12.9
Ages 5-17	4.6
Total for Ages 0-17	6.8

Del Norte, Humboldt, and Mendocino Counties	Rate per 10,000
Ages 0-4	12.6
Ages 5-17	3.7
Total for Ages 0-17	6.1

Fresno County	Rate per 10,000
Ages 0-4	22.7
Ages 5-17	9.9
Total for Ages 0-17	13.3

Imperial County	Rate per 10,000
Ages 0-4	S
Ages 5-17	7.7
Total for Ages 0-17	7.6

Kern County	Rate per 10,000
Ages 0-4	11.3
Ages 5-17	4.2
Total for Ages 0-17	6.1

Kings County	Rate per 10,000
Ages 0-4	S
Ages 5-17	S
Total for Ages 0-17	4.9

Lassen, Modoc, Nevada, Plumas, and Sierra Counties	Rate per 10,000
Ages 0-4	S
Ages 5-17	S
Total for Ages 0-17	5.6

Los Angeles County	Rate per 10,000
Ages 0-4	20.4
Ages 5-17	6.6
Total for Ages 0-17	10.3

Madera County	Rate per 10,000
Ages 0-4	14.3
Ages 5-17	6.2
Total for Ages 0-17	8.3

Marin County	Rate per 10,000
Ages 0-4	13.8
Ages 5-17	S
Total for Ages 0-17	5.8

Merced County	Rate per 10,000
Ages 0-4	13.8
Ages 5-17	6.5
Total for Ages 0-17	8.5

Monterey and San Benito Counties	Rate per 10,000
Ages 0-4	17.8
Ages 5-17	6.5
Total for Ages 0-17	9.5

Napa County	Rate per 10,000
Ages 0-4	S
Ages 5-17	S
Total for Ages 0-17	S

Orange County	Rate per 10,000
Ages 0-4	14.6

Orange County	Rate per 10,000
Ages 5-17	4.2
Total for Ages 0-17	7.0

Placer County	Rate per 10,000
Ages 0-4	16.6
Ages 5-17	4.4
Total for Ages 0-17	7.7

Riverside County	Rate per 10,000
Ages 0-4	14.4
Ages 5-17	6.8
Total for Ages 0-17	8.8

Sacramento County	Rate per 10,000
Ages 0-4	20.2
Ages 5-17	7.9
Total for Ages 0-17	11.2

San Bernardino County	Rate per 10,000
Ages 0-4	15.1
Ages 5-17	7.6
Total for Ages 0-17	9.6

San Diego County	Rate per 10,000
Ages 0-4	24.4
Ages 5-17	7.1
Total for Ages 0-17	11.7

San Francisco County	Rate per 10,000
Ages 0-4	25.3
Ages 5-17	5.1
Total for Ages 0-17	10.5

San Joaquin County	Rate per 10,000
Ages 0-4	18.5
Ages 5-17	6.8
Total for Ages 0-17	10.0

San Luis Obispo County	Rate per 10,000
Ages 0-4	11.9
Ages 5-17	S
Total for Ages 0-17	4.3

San Mateo County	Rate per 10,000
Ages 0-4	15.2
Ages 5-17	2.1
Total for Ages 0-17	5.6

Santa Barbara County	Rate per 10,000
Ages 0-4	7.5
Ages 5-17	2.3
Total for Ages 0-17	3.7

Santa Clara County	Rate per 10,000
Ages 0-4	15.4
Ages 5-17	4.0
Total for Ages 0-17	7.0

Santa Cruz County	Rate per 10,000
Ages 0-4	16.5
Ages 5-17	4.2
Total for Ages 0-17	7.5

Shasta County	Rate per 10,000
Ages 0-4	18.8
Ages 5-17	S
Total for Ages 0-17	6.9

Siskiyou, Tehama, and Trinity Counties	Rate per 10,000
Ages 0-4	S
Ages 5-17	S
Total for Ages 0-17	4.8

Solano County	Rate per 10,000
Ages 0-4	10.2
Ages 5-17	3.6
Total for Ages 0-17	5.3

Sonoma County	Rate per 10,000
Ages 0-4	10.4
Ages 5-17	2.6
Total for Ages 0-17	4.7

Stanislaus County	Rate per 10,000
Ages 0-4	15.4
Ages 5-17	7.0
Total for Ages 0-17	9.3

Sutter County	Rate per 10,000
Ages 0-4	S
Ages 5-17	S
Total for Ages 0-17	8.5

Tulare County	Rate per 10,000
Ages 0-4	21.2
Ages 5-17	5.4
Total for Ages 0-17	9.6

Ventura County	Rate per 10,000
Ages 0-4	10.3
Ages 5-17	5.0
Total for Ages 0-17	6.4

Yolo County	Rate per 10,000
Ages 0-4	10.4
Ages 5-17	5.5
Total for Ages 0-17	6.8

Yuba County	Rate per 10,000
Ages 0-4	S
Ages 5-17	S
Total for Ages 0-17	9.6

Definition, Source & Notes (Return to top)

Definition: Number of hospital discharges for a primary diagnosis of asthma per 10,000 children ages 0-17, by age group (e.g., in 2022, the asthma hospitalization rate among California children ages 0-4 was 17.3 per 10,000).

Data Source: [California Breathing](#), tabulation of data from the California Dept. of Health Care Access and Information (Aug. 2024).

Footnote: Data are based on the number of hospitalizations, not the number of children hospitalized. Data are limited to hospital admissions; emergency department visits that do not result in admission are excluded. Transfers from one hospital to another are treated as separate hospitalizations. County-level data reflect the patient's county of residence, not the county in which the hospitalization occurred. Data are based on [International Classification of Diseases, Tenth Revision, Clinical Modification \(ICD-10-CM\)](#) code J45. The notation S refers to data that have been suppressed because there were fewer than 12 asthma hospitalizations in that group.

Learn More About Asthma

Measures of Asthma on Kidsdata.org

On kidsdata.org, estimates of [lifetime asthma prevalence](#) are derived from reports of children ages 1-17 being told by a doctor that they have asthma. [Rates](#) and [numbers](#) of asthma hospitalizations—which reflect the most severe asthmatic episodes—also are provided for children ages 0-17, by age group.

Why This Topic Is Important

Asthma is one of the most common chronic diseases among children in the U.S. and a leading cause of pediatric hospitalization (1). It also is the top reason for missed school days, accounting for more than 5.2 million absences annually (1, 2). Asthma affects around 6 million children nationwide, at an average annual health care cost of more than \$1,700 per child (2).

Asthma rates vary by region, demographics, environment, physician diagnostic practices, and access to care. Although identifying the impact of independent risk factors for asthma is difficult, children of color and those from low-income families are at disproportionately high risk for severe symptoms, missed school days, and hospital visits due to asthma (1, 3, 4). In particular, African American/black and Puerto Rican children experience a greater asthma burden compared with white children in the U.S. (1).

Asthma can be life-threatening when it is not managed properly. The CDC estimates that approximately 40% of children with asthma do not have their disease under control (5). Symptoms can be managed with regular medical monitoring and personalized action plans that help children use medicine as prescribed and to avoid asthma triggers (5, 6). However, children who face difficulty accessing quality health care are less likely to have well-controlled asthma (4, 5).

For more information, see [kidsdata.org's Research & Links section](#).

Sources for this narrative:

1. Rozwadowski, F. M., et al. (2019). Assessing indoor environmental control practices by race/ethnicity among children with asthma in 14 U.S. states and Puerto Rico, 2013–2014. *Preventing Chronic Disease*, 16, 190199. Retrieved from: https://www.cdc.gov/pcd/issues/2019/19_0199.htm
2. Nurmagambetov, T., et al. (2018). The economic burden of asthma in the United States, 2008–2013. *Annals of the American Thoracic Society*, 15(3), 348–356. Retrieved from: <https://www.atsjournals.org/doi/10.1513/AnnalsATS.201703-259OC>
3. Assari, S., & Moghani Lankarani, M. (2018). Poverty status and childhood asthma in white and black families: National Survey of Children's Health. *Healthcare*, 6(2), 62. Retrieved from: <https://www.mdpi.com/2227-9032/6/2/62/html>
4. Johnson, S. B., et al. (2019). Asthma and attendance in urban schools. *Preventing Chronic Disease*, 16, 190074. Retrieved from: https://www.cdc.gov/pcd/issues/2019/19_0074.htm
5. Hsu, J., et al. (2018). *EXHALE: A technical package to control asthma*. Centers for Disease Control and Prevention. Retrieved from: <https://www.cdc.gov/national-asthma-control-program/php/exhale/index.html>
6. CDC Vital Signs. (2018). *Asthma in children: Working together to get it under control*. Centers for Disease Control and Prevention. Retrieved from: <https://stacks.cdc.gov/view/cdc/51345>

How Children Are Faring

In 2019-2020, an estimated 12% of California children ages 1-17 had been diagnosed with asthma at some point in their lives, down from 16% in 2005. At the county level, the share of children ever diagnosed with asthma ranged from fewer than 1 in 20 (San Luis Obispo, Santa Barbara) to more than 1 in 4 (Butte, Kings, Napa) in 2019-2020.

While asthma does not result in hospitalization for most children, there were 7,705 hospitalizations for asthma among children ages 0-17 statewide in 2022—a rate of 8.9 hospitalizations per 10,000. The number of pediatric asthma hospitalizations in 2022 was nearly three times higher than in the first year of the COVID-19 pandemic (2,719 hospitalizations in 2020), but similar to 2019 figures (7,670 hospitalizations). California children ages 0-4 generally experience higher rates of asthma hospitalization (17.3 hospitalizations per 10,000 in 2022) than older children ages 5-17 (5.9 per 10,000 in 2022).

Policy Implications

Asthma is major public health problem in the U.S., affecting an estimated 6.1 million children and 16.5 million adults, at an annual cost of more than \$80 billion (1, 2). It is a leading cause of childhood hospitalizations and missed school days, with children of color—particularly African American/black children—and those from low-income families disproportionately affected by the disease (2, 3, 4). While asthma can be debilitating, even life-threatening, it usually is controllable (5). Asthma can be triggered by environmental conditions such as outdoor air pollution, tobacco smoke, and poor indoor air quality, as well as by other causes such as viral infections, exercise, and stress (2, 5). State, local, and school policies that reduce asthma triggers and that facilitate effective management and treatment of asthma can have positive effects on controlling the disease (2, 5). Effective asthma control strategies also require collaboration and commitment across multiple sectors (e.g., health care, public health, education, social services, community organizations, etc.) focused on multiple levels, including individuals, families, communities, providers, and systems (2, 5).

Policy and practice options that could influence asthma rates, management, and disparities include:

- Ensuring that all children have adequate, accessible, and affordable health care and insurance coverage for effective prevention and treatment of asthma, including coverage for asthma medications and supplies; as part of this, ensuring that health care providers deliver coordinated care and adhere to guidelines-based management practices (2, 5)
- Enforcing and strengthening laws and regulations that limit air pollution from vehicles, agricultural and industrial practices, and other sources; also, promoting clean diesel school buses and reducing student exposure to exhaust (2, 5)
- Strengthening school policies to improve indoor air quality; facilitate communication and record sharing among families, schools, and health care providers; and educate students, staff, and parents on asthma care—including asthma self-management education (5)
- Promoting integrated, community-wide interventions that decrease the burden of asthma on populations at highest risk, including outreach and education, home visiting, and reduction of asthma triggers in homes, schools, child care centers, and workplaces (5)
- Advancing policies that go beyond poverty reduction to address structural and environmental factors that are associated with asthma and disproportionately experienced by some groups, such as African American/black families (4)
- Funding local and state tobacco control efforts to reduce secondhand smoke exposure, particularly in multi-unit housing settings, restrict access to cigarettes, and increase the availability and use of smoking cessation programs (5, 6)
- Promoting effective strategies to decrease exposure to wildfire smoke in vulnerable communities, such as providing cleaner air shelters and public education on wildfire preparedness and appropriate use of air conditioners and filters (7)

For more information, see [kidsdata.org's Research & Links section](#) or visit [California Breathing](#). Also see the following topics on [kidsdata.org](#): [Hospital Use](#) and [Air Quality](#).

Sources for this narrative:

1. Nurmagambetov, T., et al. (2018). The economic burden of asthma in the United States, 2008–2013. *Annals of the American Thoracic Society*, 15(3), 348-356. Retrieved from: <https://www.atsjournals.org/doi/10.1513/AnnalsATS.201703-259OC>
2. Patel, S. J., & Teach, S. J. (2019). Asthma. *Pediatrics in Review*, 40(11), 549-567. Retrieved from: <https://publications.aap.org/pediatricsinreview/article-abstract/40/11/549/35239/Asthma>
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6. Vuong, T. D., et al. (2019). *California tobacco facts and figures 2019*. California Department of Public Health. Retrieved from:
<https://www.cdph.ca.gov/Programs/CCDPHP/DCDIC/CTCB/CDPH%20Document%20Library/ResearchandEvaluation/FactsandFigures/CATobaccoFactsandFigures2019.pdf>

7. Stone, S. L., et al. (2019). *Wildfire smoke: A guide for public health officials*. California Air Resources Board, et al. Retrieved from:
<https://www.airnow.gov/wildfire-smoke-guide-publications>

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