

# Black and Hispanic children suffer disproportionately from asthma. Climate change is making it worse

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Ever since they were infants, LaRae Cantley's four children were constantly in and out of the emergency room, because they couldn't breathe.

Each have respiratory problems, and two suffer from asthma. Cantley always carried around breathing treatment instructions and regularly went to the hospital for her children's treatments.

"I thought that was normal," she said. "I thought every child had that, or every parent was experiencing that in the first stages of a newborn's life."

The South Los Angeles family lives in a low-income Black and brown housing community. The apartment has no [air conditioning](#), and [hot weather](#) can exacerbate asthma and respiratory conditions. On hot sunny days, her 12-year-old son Royalty can't play outside or join in P.E.

"He cannot do these certain physical activities in the sun," Cantley said of her son, who has bronchiectasis, a chronic condition where airways widen resulting in coughing and fluid buildup. Similarly, her daughter was forced to running track due to her asthma.

Lainisha Pounds, also a Los Angeles mom, said her daughter suffered frequent episodes of trouble breathing as a child.

"It was so hard seeing her little body not being able to breathe," she said.

Their children aren't alone.

Black and Hispanic kids disproportionately suffer from asthma. Both are twice as likely as white children to be hospitalized for asthma. Black

children are four times and Hispanics 40% more likely to die from the disease. Studies have shown that poorer Black children are more likely than white children to be admitted to the pediatric intensive care unit for "critical and near-fatal" childhood asthma.

As [climate change](#) creates record-breaking temperatures that plague the nation, experts warn of disparate, worsening asthma and breathing conditions among children of color.

Higher temperatures mean higher levels of ozone, a gas that forms from burning fossil fuels. That's a particular concern for inner-city kids of formerly redlined neighborhoods because of the [urban heat island effect](#), which occurs when certain neighborhoods are exposed to more pollutions. These communities also have less green spaces. All of those factors make these areas hotter than other parts of a city, explained Dr. Bridgette Jones, an allergist and pediatrician at Children's Mercy Hospital in Kansas City, Missouri.

"Extreme heat is one of the contributors or causes of asthma and particularly asthma exacerbation," she said. "On days where there are higher temperatures, and there's high ozone levels due to the higher temperatures, there's increased asthma exacerbations, particularly among children."

Jones sees this more commonly among her Black and Hispanic patients.

"As we continue to see warming and more extreme temperatures, that will only lead to more frequent asthma exacerbations," she said.

Pediatrician and hospitalist Dr. Aaron Bernstein is the interim director of Harvard University's Center for Climate, Health and the Global Environment. He said the causes are glaringly due to structural inequities in housing, wealth and access to health care.

"It is so painfully obvious the systemic discrimination when I have to take care of children," Bernstein said. "We're still living with decisions that were made based on race."

He said the disparity is one of many direct consequences "propagated" by previous federal policies such as redlining that systematically denied home ownership loans to Black Americans, relegating families to poorer, underinvested neighborhoods.

"Any parents in this country would absolutely want this for their child: To not have to spend a day in the hospital, to not have to struggle breathing, to not have all these consequences of asthma," he said. "And right now, parents of children of color are dealing with that, by no choice of their own."

Such a family propelled Dr. Renee Salas, an emergency medicine physician and Yerby Fellow at the Harvard center, into the intersection of climate, environment and health inequities. A 4-year-old girl from the Boston metro area who was rushed to Salas' emergency room for the third time in one week due to asthma attacks.

"Her mother was just really beside herself," she said. "I will never forget she looked at me and said, 'I'm doing everything they're telling me to do, but she's just not getting better.'"

Looking through the girl's medical records, Salas learned she lived in a previously redlined neighborhood close to a highway.

"My patient was in a situation where I was putting a BandAid on a bullet wound to try to stabilize her disease, but sending her back out in an environment where she had air pollution, ground-level ozone and pollen, that all had a root cause in the burning of fossil fuels," she said.

The American Thoracic Society has found when children are exposed to long-term air pollution, namely traffic-related, they're more likely to develop asthma.

"But we also know that neighborhoods that have been previously redlined are also hotter than other neighborhoods," she said. "That has significant implications for asthma because ozone, which is an air pollutant, can be formed at higher rates in hotter environments."

There are clear associations between those factors and asthma, Salas said.

Children's bodies, like Salas' 4-year-old patient, can't regulate heat as well as adults' bodies, said Dr. Stephanie Holm, a pediatrician and co-director of the Western States Pediatric Environmental Health Specialty Unit.

Holm said there needs to be more awareness that heat can make health conditions worse—and that the risks aren't equal.

"Lots of folks, if you say, 'It's a hot day, what should you worry about for a kid?' They might think of making sure that they are hydrated, or making sure that they're not getting too much sun exposure," she said. "Both of which, of course, are important things. But (they) may not think about the fact that it can make underlying health conditions worse. That includes asthma."

Laonis Quinn, a registered nurse and certified asthma educator in Detroit, started the Anthony J. Chapman Foundation after her son Anthony died from an asthma attack. He was 23, and had struggled with the disease his whole life. He lacked specialty care when he was kicked off his mom's insurance at 21. That's when, "We became [emergency room](#) patients," she said.

"It took me a very, very, very long time to say his name out loud," she said. "I channeled the pain into what I'm doing now."

With the foundation, she gives away free nebulizers, spacers, mattress covers and education materials on asthma treatment and triggers.

Back in Los Angeles, Paula Torrado Plazas, an air quality and toxics policy analyst at Physicians for Social Responsibility, said during listening sessions with parents, many tell her there's no shade or tree canopies to alleviate heat as they walk their children to school.

She recalled a Hispanic grandmother raising her grandchildren in South Los Angeles. During heatwaves, she doesn't let her kids play outside because of their [asthma](#). They live in an apartment without air conditioning near an oil and gas facility, adding to the poor air quality.

"A few days ago, it was kind of raining, but it was really hot," Plazas said. "She mentioned how the fumes and odors were intensified, and they felt locked down in their house."

Cantley, also a community activist, said she wishes her children and others could have equal opportunities to breathe fresh air—"to be able to choose what they dream to do—and be able to have the freedom to do it without being restricted because of their inability to breathe."

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