



Editorial

We continue to fail black children with asthma and allergic disease



Black children have higher prevalence of asthma and increased rates of asthma morbidity and mortality than white children, which has been documented for decades, and this disparity remains persistent.¹ In this issue of the *Annals of Allergy, Asthma & Immunology*, Sitarik et al² describe their study that determined whether disparities associated with asthma and allergy observed between black and white children at the age of 2 years remained at the age of 10 years. They found that at 10 years, black children were still more likely to have eczema, asthma, and allergen sensitization compared with white children, even when controlling for socioeconomic status. The authors point out the lack of progress in closing the gaps in racial disparities in asthma- and allergy-related health care. This study adds to the wide collection of evidence that reveals we are continuing to fail black children with asthma and allergic conditions.

Research studies that investigated the cause of asthma- and allergy-related disparities between racial and ethnic groups have often focused on socioeconomic factors such as poverty and educational status. However, Sitarik et al and others show that health disparities transcend socioeconomics. Themes in the literature seeking to explain race- and ethnicity-related disparities have also included factors believed to be controlled by or intrinsic to the patient or community, such as medication adherence, knowledge, and beliefs. Such models rely on those who are most marginalized to fix systemic issues that are beyond their personal control. As clinicians, researchers, policy makers, and influencers, we must examine our role in addressing the individual, institutional, and structural barriers to achieving health equity in asthma and allergic disease.

A recent study identified differential treatment response between black and white children to ICS vs long-acting beta-agonist step-up therapy for uncontrolled asthma.³ This differential response profile may be related to differing phenotypes observed between black and white children.⁴ The cause of differential phenotype is likely multifactorial and poorly understood. Genetic association studies have identified genetic variants associated with pathophysiology and treatment response (eg, *ADBR2* polymorphisms) in black children. However, these studies do not fully explain the disease risk and morbidity/mortality for complex diseases, such as asthma and allergies. Moreover, genetic makeup is more similar than different among identified racial/ethnic groups. Race is a social construct or label assigned based on arbitrary and

subjective designations rather than a genetic or biological difference.⁵ Although small genetic differences do not explain the entirety of asthma- and allergy-related health disparities, epigenetic changes caused by differential exposures (eg, pollution, long-term stress) more likely affect disease pathophysiology and outcomes.

It is striking that the differential treatment response between black and white children to mainstay which have been recommended in expert guidelines for decades was just identified in the aforementioned study.³ Overall, we understand very little about the underlying pathophysiology, drivers, and treatment response profiles in black children because they are poorly represented within clinical and translational studies related to asthma and allergy despite the high prevalence and disease burden in this population.⁶ The NIH requires reporting of racial/ethnic demographics of participants included in funded studies. The Food and Drug Administration states that it encourages sponsors to include diverse populations in clinical trials, and they recently released a draft guidance document for commentary on the topic. However, neither the NIH nor the Food and Drug Administration requires that a specific proportion of racial/ethnic groups be represented in studies even when the study involves conditions that largely affect those groups. To identify the root causes of asthma- and allergy-related health disparities and to develop successful interventions to mitigate these disparities, black children must be meaningfully included in research.

The lack of diversity among researchers is intertwined with the lack of inclusion of diverse communities in the research and impactful research to underserved communities. A recent publication revealed that black scientists are less likely to receive research funding from the NIH and that this funding disparity is partially explained by the research topic choice because black researchers more often conduct community and population research focused on health disparities rather than basic science research. The study also reveals bias within the review process in general and suggests a disparity in resources and institutional support for black researchers in developing competitive applications.⁷ These alarming findings demonstrate a significant institutional barrier to research that reduces the disparities that affect minoritized populations. The NIH, other funders, and academic medical centers must work to address this bias within the research funding process from all ends.

Access to quality health care is a structural barrier to closing health care gaps. Owing to the legacy of residential segregation, most black resident areas have limited access to health care.⁸ It is important that the goals around developing the future allergy/asthma/immunology workforce include training a diverse group of specialists who will serve in under- or nonserved areas and who

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will specifically serve black communities. African American, Hispanic, and Native American physicians are more likely to practice in underserved areas than white physicians.⁹ Black communities are often discussed as having a limited knowledge around asthma and allergic disease, although this notion has been countered.¹⁰ An influential factor to the uptake of medical education is cultural awareness among health care providers and overall diversity within medical teams. Racial concordance and diverse representation in medical teams lead to improved adherence and uptake of education and recommendations.¹¹ A report in 2007 demonstrated a small increase in minority allergy/asthma/immunology specialists (5%–6%) between 1999 and 2004.¹² However, intentional focus on diversifying the allergy/asthma/immunology workforce is needed to achieve meaningful gains that affect allergy- and asthma-related health disparities.

The American Academy of Pediatrics asserts in a recent policy statement that “Failure to address racism will continue to undermine health equity for all children, adolescents, emerging adults, and their families.” Racism is defined as a “system of structuring opportunity and assigning value based on the social interpretation of how one looks (which is what we call ‘race’) that unfairly disadvantages some individuals and communities, unfairly advantages other individuals and communities, and saps the strength of the whole society through the waste of human resources.”⁵ Structural and interpersonal racism are drivers of the factors previously discussed (eg, lack of access to quality care, equitable research inclusion, and types of research conducted) leading to persistent health care disparities. For example, redlining practices that provide policy-level structure to racial segregation and under-resourcing of black communities still have remaining effects not only on health care access but also the disparate impact of climate change on health.¹³ Black people in the United States have and continue to bear the impact of racism on their everyday lives. As a group who were enslaved and without basic human rights in a nation for far longer than the nation has existed, the impact is pervasive and persistent throughout generations, including those of today.

As a specialty, we must deal with how racism and white supremacy-based theories influence the way that we practice and deliver care. The assessment of lung function via spirometry measurement continues to include race as a correction factor. The inclusion of race correction factors for spirometry is based on flawed science designed to legitimize the notions of inferiority of those who are labeled black to those labeled white. “The smaller lung capacity of the colored race is in itself proof of an inferior physical organism” said Gould in 1969, a driver of race-based spirometry correction.¹⁴ This is just one example of how racial bias affects even objective measures to diagnose and manage asthma. We must also grapple with our own implicit and explicit biases about patients, families, and communities and their overall worth and value in

addressing conditions and diseases that affect those groups. Black children are affected by structural factors that increase their risk for asthma and allergic conditions, morbidity, and disease-related mortality. “Health equity means that everyone has a fair and just opportunity to be as healthy as possible” according to the Robert Wood Johnson Foundation. Black children have not been provided a fair and just opportunity to lead lives free of disproportionately high asthma and allergy burdens. But opportunity awaits.

Bridgette L. Jones, MD, MS

Department of Pediatrics

University of Missouri-Kansas City

Divisions of Allergy, Asthma and Clinical Immunology and Pediatric

Pharmacology and Therapeutic Innovation

Children's Mercy Hospital

Kansas City, Missouri

bljones@cmh.edu

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