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Disentangling the root causes of racial disparities in asthma: The role of structural racism in a 5 year-old Black boy with uncontrolled asthma

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Keywords

implicit bias; disparities; asthma; bias; structural discrimination; racism

CASE

A 5 year-old Black boy was seen at the Allergy Clinic with a history of "frequent wheezing." He has had several wheezing episodes per year since infancy and has never been hospitalized. He has been treated at the emergency room with nebulized albuterol and prednisone at each visit. He has never been on a controller medication. He has daily symptoms and cough with activity, and uses an inhaled short-acting beta-agonist at least two times per week. He had two episodes of nighttime symptoms last month. He does not have a primary care provider and receives medical care through the emergency room. He had a lapse in Medicaid coverage last year, after he and his family were evicted from their apartment, as their landlord did not pay the mortgage. He now lives in a shelter apartment with his mother and older brother, located near a major expressway. There is no secondhand tobacco smoke exposure. He is unable to do spirometry and his serum specific-IgE testing shows cat, cockroach, mouse, oak and Alternaria sensitization. His mother reports seeing mouse droppings and cockroaches in the shelter hallway.

DISCUSSION:

Incorporating Social Context in Asthma Management

Our patient's struggle with asthma is a manifestation of the marked racial and ethnic disparities recognized for decades, but sadly, have persisted[1, 2]. Understanding the

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contribution of historical and social influences in the United States and the opportunities for advocacy, health care reform, and medical research will help not only address this patient's needs but also shrink racial and ethnic asthma disparities[3, 4].

Racism has shaped our medical evaluation and scientific analysis of differences between racial and ethnic groups[5], leading to the incorrect view of race as a biologic construct while excluding race as a social construct conceived out of a hierarchy of systematic oppression of Blacks[6-8]. In fact, structural racism, which is the integration of historically-rooted and culturally-enforced discriminatory practices and policies into social, economic, healthcare, criminal justice and political systems,[9] is a major force behind health disparities[5, 10, 11]. Racial residential segregation is an example of structural discrimination[9] and stems from explicit discriminatory policies of mortgage lenders and governmental agencies starting in the 1930s that promoted segregation, often referred to as redlining[9, 12]. This physical separation has led to a concentration of resources and wealth in White communities and concentration of poverty in Black communities[12]. There is a growing literature examining health consequences of racial residential segregation[9, 13-15]. This economic and social disadvantage results in reduced access to primary and specialty care, particularly high-quality care, and disinvestment in community health resources[9]. There is a higher concentration of dilapidated housing, which is conducive to mice, cockroaches, and fungi ("mold"); and minority communities also have higher outdoor air pollution exposure and a greater likelihood of hazardous waste exposure[16]. Together these downstream effects on health care access and quality and environment, harm the health of our minority patients.

The pharmacologic management of this patient's asthma is straightforward, but addressing his environmental, health care access, and housing needs is complicated, but paramount, as these social challenges are root causes of his uncontrolled asthma. While our patient needs guidelines-based asthma management, pharmacologic management should be paired with tools to address his family's social circumstances in order to address the root causes of his uncontrolled asthma. Because the resources to address our patient's social needs are inadequate and fragmented, ultimately systems-level change is required to ensure all such patients have access to high quality health care, appropriate medications, and healthy housing.

In today's healthcare landscape, clinicians can serve a critical role in advocating for necessary change while delivering high-quality asthma care to their patients[17]. Specific recommendations for the management of patients like the one discussed here include:

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Patient level

- Be aware - asking about a patient's social challenges in a culturally competent and sensitive manner
- Offer health recommendations appropriate to patients' social contexts – e.g. selection of medications to minimize costs[18]
- Refer to a social worker, connect to social services, particularly those providing housing support and related services

Practice level[19]

- Partner with local health department programs that offer asthma home visits[20,21]
- Institute social needs screening to identify and link patients to social services e.g. community health workers, social workers

In addition, there are opportunities for clinicians to advocate and support system-level change, including:[17]

- Advocate for expansion of state Medicaid managed care programs to screen for social needs and provide social services referrals (CMS Health Accountable Communities Model) – presently only in 31 states[22]
- Encourage medical center and community partnerships utilizing existing resources, e.g. medical legal partnership formed with two Cincinnati Children's Hospital Medical Center primary care clinics led to the identification of a substandard housing cluster [23,24]
- Advocate for health care reform that guarantees access to essential asthma medicines. For example, an American Thoracic Society's policy statement calls for the creation of an independent, national entity to allow restructuring of the pharmaceutical supply chain, with guaranteed availability of essential asthma medicines on Tier 1 formularies of all insurance plans[18]