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ABSTRACT

Asthma, a lifelong disease, unequally affects children from low-income and marginalized communities. It is a leading cause of hospitalization among children, especially minorities. My critical review highlights how social stress, poor housing, limited healthcare access, and environmental exposures—like traffic pollution and industrial emissions—contribute to an unjust increase in asthma. Key findings show that substandard housing, air pollution, and psychosocial stressors such as discrimination and anxiety intensify asthma risk. These factors often coincide, creating health scares for vulnerable children. To reduce these disparities, a multimethod approach is a must: better healthcare access, environmental policy reform, and community health education. Addressing these systemic issues can lead to improved health equity and reduced asthma rates in high-risk groups.

INTRODUCTION



Alzein Pediatrics. Boy using an asthma inhaler in the park [Internet]. Oa k Lawn (IL): Alzein Pediatrics; [date unknown] [cited 2025 Aug 1]. Available from: <https://alzeinpeds.com>

Asthma affects over 300 million people globally, with low-income and minority children bearing a disproportionate burden (Serebrisky et al., 2019). These disparities are driven not by biology, but by social and environmental inequities (Perez et al., 2021).

Key factors include:

- Air pollution
- Poor housing
- Limited healthcare access
- Chronic stress (Grant et al., 2022; Stephens et al., 2021; Vela et al., 2022; Yonas et al., 2012)

Minority children experience higher hospitalization rates, inadequate treatment, and more severe symptoms. This review calls for urgent policy reform and public health interventions to ensure equity in asthma care and outcomes for all children.

RESULTS

Asthma in Low-Income & Minority Communities

Studies show that Black and Hispanic children are less privileged to get prescriptive inhaled corticosteroids which are necessary drugs for asthma control when compared with their White peers even when they have similar symptoms (Samedy Bates et al., 2019).

- Higher asthma rates are linked to overlapping social, environmental, and healthcare barriers
- Poor housing conditions expose children to asthma triggers
- Air pollution and environmental toxins increase risk and severity
- Limited access to consistent medical care leads to unmanaged symptoms
- Chronic stress from poverty and racial discrimination worsens outcomes

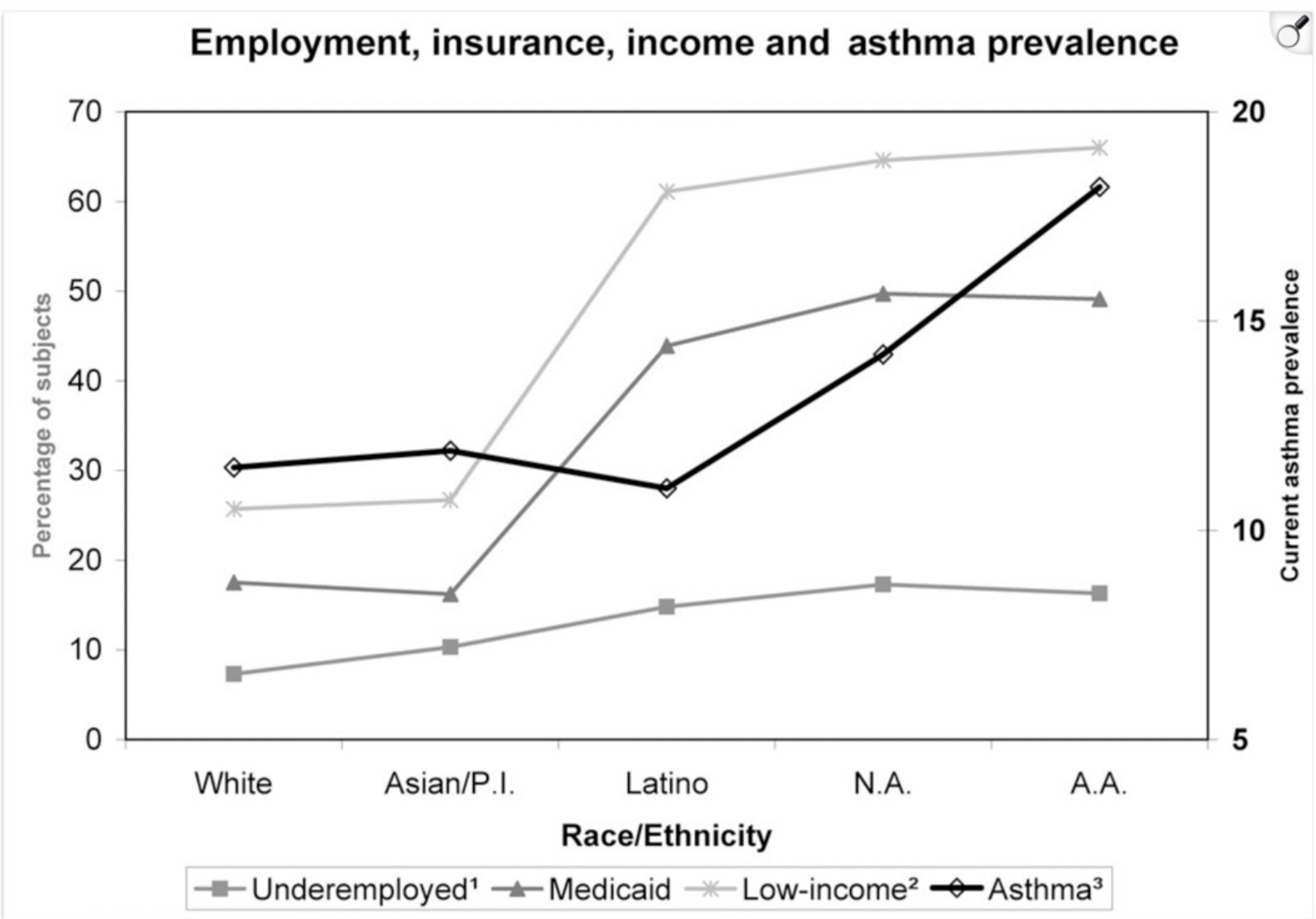


Figure Legend 1: Underemployment, household income, insurance type, and asthma prevalence in children (ages 0–17) in the United States. Key Observations: (Forno 2009)

- Native American (N.A.) and African American (A.A.) children have the highest asthma prevalence among all racial groups
- These groups also show higher rates of underemployment, Medicaid reliance, and low household income
- White and Asian/Pacific Islander (P.I.) children have lower asthma prevalence
- Lower asthma rates in these groups are associated with less socioeconomic disadvantage
- The data indicate a strong link between economic hardship and asthma rates
- These patterns highlight systemic disparities that disproportionately affect minority communities

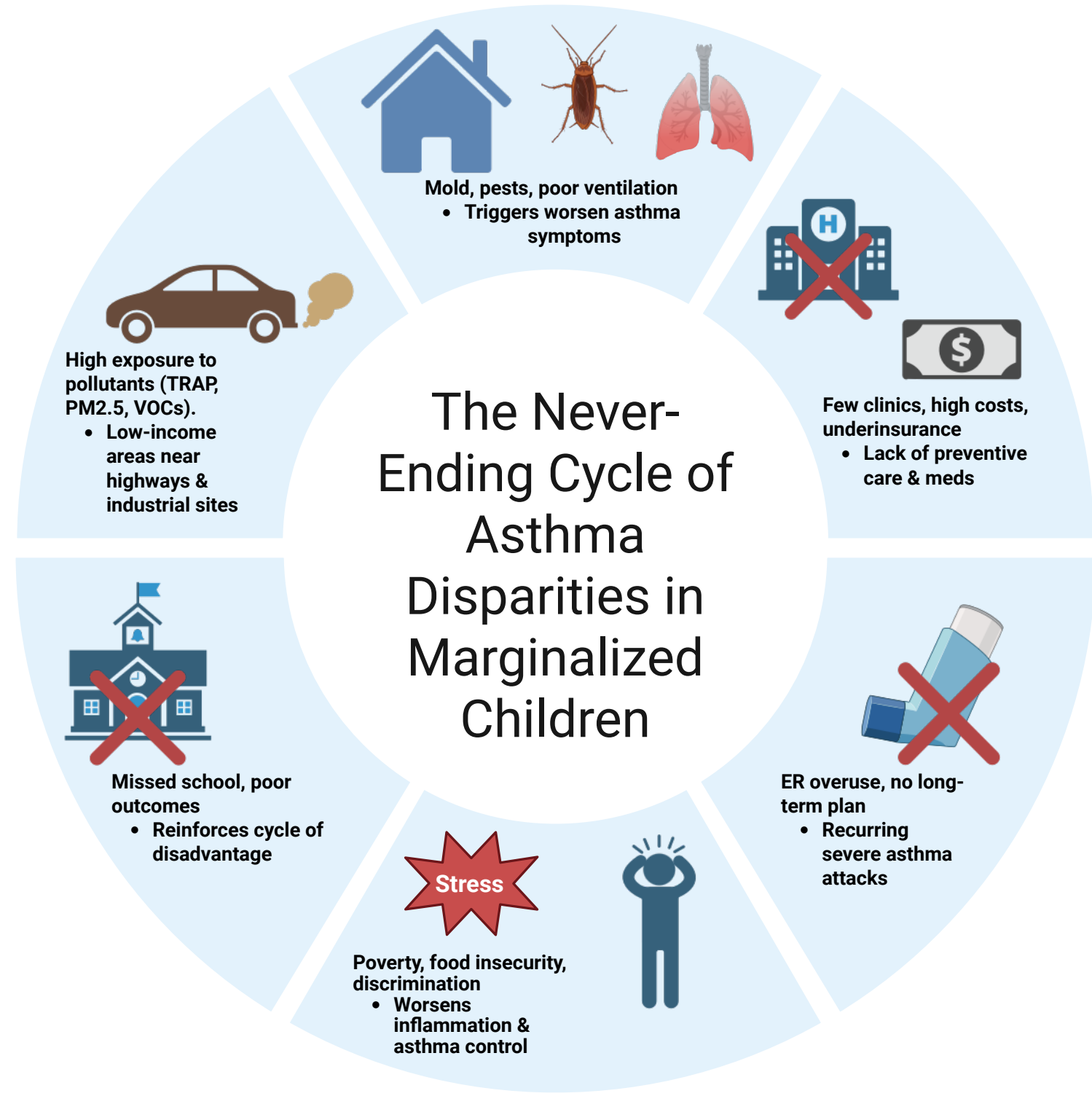


Figure 2. The Never-Ending Cycle of Asthma Disparities in Marginalized Children. This diagram illustrates the interconnected factors that perpetuate asthma disparities among children in low-income and racially marginalized communities. (Stevens et al., 2021)

Cycle of Asthma Disparities in Marginalized Children

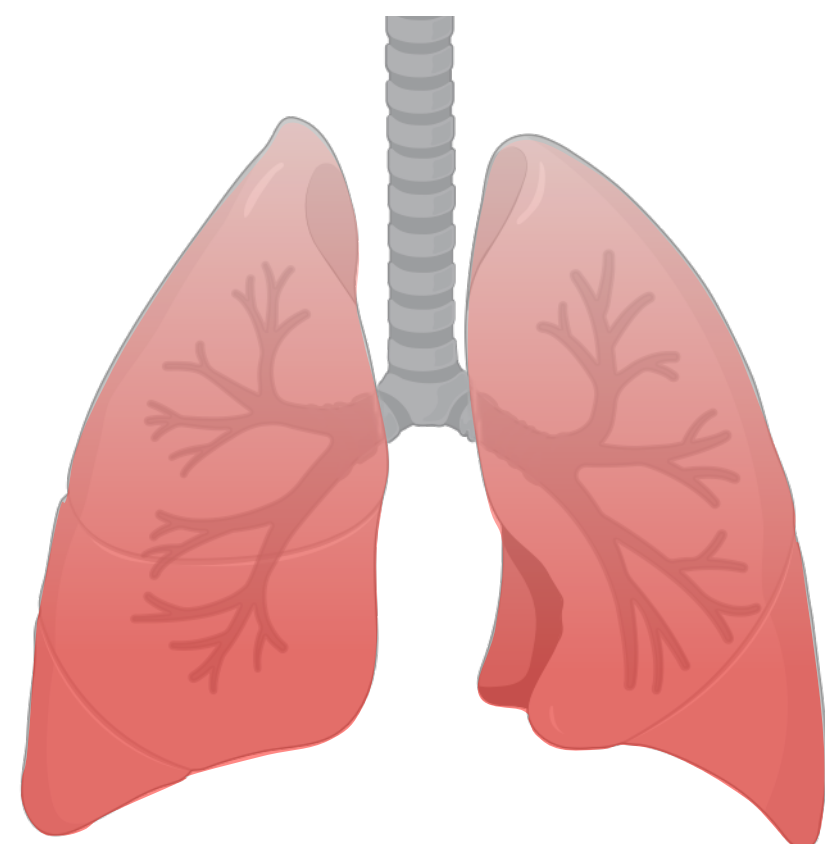
A recent study by Bryant Stephens et al. (2021) highlighted that children who were living in houses with persistent mold exposure increased asthma by 50% more than those who were living in well-kept housing conditions.

- exposure to air pollutants and substandard housing (mold, pests, poor ventilation) trigger asthma
- Limited access to preventive healthcare results in poorly managed symptoms
- Children depend on emergency care, leading to repeated severe asthma attacks
- Chronic stress from poverty, food insecurity, and discrimination worsens inflammation and asthma control
- Asthma-related challenges cause missed school days and poorer long-term outcomes
- These effects reinforce a cycle of health and social disadvantage, perpetuating asthma disparities across generations

FUTURE DIRECTIONS

Addressing Asthma Inequities: A Multi-Level Approach

- Implement stricter emissions regulations and improve air quality monitoring in marginalized communities
- Invest in green infrastructure such as parks and clean public transportation (Woodward et al., 2023)
- Expand Medicaid coverage and increase funding for community health centers
- Develop school-based asthma programs to support early intervention
- Train healthcare providers in culturally competent care to reduce treatment disparities (Baptist et al., 2023)
- Promote multi-sector collaboration among public health agencies, government, and local communities
- Encourage policy research to evaluate and scale the most effective interventions (Baciu et al., 2017)



CONCLUSION

Asthma disparities in low-income and minority children are rooted in systemic inequities—not biology. Environmental injustice, poor housing, limited healthcare access, and chronic stress all combine to worsen asthma severity and outcomes. Children in underserved communities often face polluted air, inadequate medical care, and chronic hardship, making asthma harder to manage and more dangerous. These factors reflect broader societal inequities—who gets clean air, healthcare, and a fair chance at good health. Achieving asthma equity requires coordinated policy change, environmental protections, better healthcare access, and social support. This is not just a health issue—it's a justice issue.

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