The Prevalence of Asthma Among Black Children in Massachusetts Compared to the General Population

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What is Asthma?

Asthma is a condition where your airways narrow and swell.

How you get asthma
Treatments

- Short-term
  - Inhalers
  - Short-term medication

- Long-term
  - Long-term medication

"Asthma"
A health disparity is defined as the difference in the incidence, prevalence, mortality, and burden of disease and other adverse health conditions that exist among specific population groups in the United States when compared in contrast to a larger group (general population). One group must be compared to a larger group.
Higher death rate for Black children with asthma compared to White children

"Health Disparities [...]"
Asthma: A Health Disparity in Massachusetts

Racial Breakdown of Massachusetts

- White: 71.7%
- Biracial: 2.0%
- Asian: 7.1%
- Black: 7.1%
- Hispanic/Latino: 12.1%

Prevalence of Current Asthma among Massachusetts Children by Demographic and Socioeconomic Factors, 2011-2013

- White, non-hispanic
- Hispanic Race
- Black, non-hispanic

U.S. Census Bureau, 2018

Mass Gov
Factors that influence the prevalence of asthma in Black children

1. Social
2. Socioeconomic
3. Environmental
4. Conclusion
Stress

Many African American parents have a heavy financial burden.

Children’s asthma attacks are left untreated.

Massachusetts Household Income by Race in Massachusetts, 2017

WBUR Bostonomix, 2017
Disadvantages

Emergency visits rates are 3 times higher for black children.

Black children are less likely to see a specialist compared to other white children.

Poorer communities; children with asthma need a healthier environment.

Figure 6.8 Asthma Emergency Department Visits by Age and Race/Ethnicity, 2012

DATA SOURCE: Acute Hospital Case Mix Databases, Massachusetts Center for Health Information and Analysis
Cost

Poverty trends down in MA, but people of color still face disparities

Percent of people with incomes below the federal poverty line, 2010-2018

Source: U.S. Census Bureau, American Community Survey. These broad race categories do not illustrate differences within racial/ethnic groups. Due to sample size issues, more specific statistics can be unreliable.
Asthma Hospitalization Cost in Massachusetts, 2002-2010
Redlining and Gentrification
Indoor and Outdoor Environment
Intervention Methods

High-efficiency particulate air filter (HEPA)

Development of low-income neighborhoods with better material

Better pay
Conclusion

By taking these considerations into account, we may see a substantial reduction in cases.
Thank you!
Any questions?
References

“Asthma.” Mayo Foundation for Medical Education and Research, 4 June 2020.


"What is a HEPA Filter?" United States Environmental Protection Agency, 3 Apr. 2019.