



Study: Asthma-related ED visits linked to areas with low education, high crime rates

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Children with asthma had a higher risk of an asthma-related emergency department (ED) visit if they lived in an area with low education or high rates of violent crime, according to a new study.

Researchers from Children’s National Hospital and George Washington University School of Medicine and Health Sciences studied data on more than 15,000 children ages 2-17 years with asthma in Washington, D.C., divided into census tracts, in 2018 and 2019. About 28% had at least one asthma-related ED visit, and 8% had at least one asthma-related hospitalization.

The risk for asthma-related ED visit or hospitalization was more than 10 times higher in some census tracts than in others, according to “Social Determinants of Health and At-Risk Rates for Pediatric Asthma Morbidity,” (Tyriss J, et al. *Pediatrics*. July 25, 2022).

Adjusted analyses showed low education was significantly associated with higher risk of ED visits and hospitalization, while violent crime was significantly associated with higher risk of ED visits.

“Complex interactions are likely involved, including with structural racism, which produces uneven access to all 5 SDOHs (social determinants of health) evaluated in this study,” authors wrote.

They also noted “decreased education attainment is associated with decreased health literacy. Violent crime reflects toxic stress.”

Authors were surprised to find pockets of high hospitalization rates in socio-economically advantaged neighborhoods, while the highest ED rates were in more socio-economically disadvantaged areas. They said this could be due to small numbers of children with asthma in the former group and low primary care use in the latter group.

Authors called for community-wide interventions to address social determinants of health, including reducing income inequality and expanding access to early childhood education, community college and mental health services.

Authors of a [related commentary](#) called the findings “a renewed call to action” to address social determinants of health and suggested systems-based approaches like improving housing and creating job opportunities in areas with high crime rates.

“We acknowledge that given the complexity of SDOH and other contextual factors that have resulted in health disparities, multipronged, long-term efforts are the most likely to show impact,” they wrote.

Resources

- [AAP clinical report *Indoor Environmental Control Practices and Asthma Management*](#)
- [AAP clinical report *Guidance on Completing a Written Allergy and Anaphylaxis Emergency Plan*](#)
- [Customizable Allergy and Anaphylaxis Emergency Plan](#)
- [Centers for Disease Control and Prevention National Asthma Control Program](#)
- Information for parents from HealthyChildren.org on [asthma symptoms](#) and [triggers](#)