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Neighborhood poverty, urban residence, race/ethnicity, and asthma: Rethinking the inner-city asthma epidemic

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Received: August 2, 2014; Received in revised form: October 9, 2014; Accepted: November 13, 2014; Published Online: January 20, 2015

65

DOI: <http://dx.doi.org/10.1016/j.jaci.2014.11.022>
 Publication stage: In Press Corrected Proof

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Background

Although it is thought that inner-city areas have a high burden of asthma, the prevalence of asthma in inner cities across the United States is not known.

Objective

We sought to estimate the prevalence of current asthma in US children living in inner-city and non-inner-city areas and to examine whether urban residence, poverty, or race/ethnicity are the main drivers of asthma disparities.

Methods

The National Health Interview Survey 2009-2011 was linked by census tract to data from the US Census and the National Center for Health Statistics. Multivariate logistic regression models adjusted for sex; age; race/ethnicity; residence in an urban, suburban, medium metro, or small metro/rural area; poverty; and birth outside the United States, with current asthma and asthma morbidity as outcome variables. Inner-city areas were defined as urban areas with 20% or more of households at below the poverty line.

Results

We included 23,065 children living in 5,853 census tracts. The prevalence of current asthma was 12.9% in inner-city and 10.6% in non-inner-city areas, but this difference was not significant after adjusting for race/ethnicity, region, age, and sex. In fully adjusted models black race, Puerto Rican ethnicity, and lower household income but not residence in poor or urban areas were independent risk factors for current asthma. Household poverty increased the risk of asthma among non-Hispanics and Puerto Ricans but not among other Hispanics. Associations with asthma morbidity were very similar to those with prevalent asthma.

Conclusions

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Although the prevalence of asthma is high in some inner-city areas, this is largely explained by demographic factors and not by living in an urban neighborhood.

Key words:

[Inner-city asthma](#), [childhood asthma](#), [urban/rural](#), [neighborhood](#), [race/ethnicity](#)

Abbreviations used:

[CDC \(Centers for Disease Control and Prevention\)](#), [NCHS \(National Center for Health Statistics\)](#), [NHIS \(National Health Interview Survey\)](#), [OR \(Odds ratio\)](#)

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Supported by the National Institute of Environmental Health Sciences (P50ES015903 , P01ES018176 , P01ES018181 , and R01ES019560), the US Environmental Protection Agency (R832139 , STAR Grant RD83451501 , and R21HL117772), the National Institute of Allergy and Infectious Diseases (R01AI070630 , U01AI083238 , T32AI007007 , K23AI103187 , and R21AI107085), and the National Cancer Institute (K07CA151910). The findings and conclusions in this article are those of the author or authors and do not necessarily represent the views of the Centers for Disease Control, the National Center for Health Statistics, or the Research Data Center.

Disclosure of potential conflict of interest: C. A. Keet has received research support from the National Institutes of Health (NIH)/National Institute of Allergy and Infectious Diseases (NIAID: 1K23AI103187 and 1R21AI10708) and the National Institute of Child Health and Human Development (1R21HD: 073557). M. C. McCormack has received research support from the NIH/National Institute of Environmental Health Sciences (R21 ES024021 and R21ES025840 pending) and has received royalties from UpToDate. C. E. Pollack has received research support from the National Cancer Institute (1K07CA151910-01A1). R. D. Peng has received research support from the NIH (5 T32 ES012871, 5 R01 ES019560, and 5 R21 ES020152). E. McGowan has received research support from the NIH/NIAID (5 T32 AI007007 35). E. C. Matsui has received research support from the NIH (5 U01 AI083238 and 5 R01 ES023447), is a member of the US Environmental Protection Agency Science Advisory Board, and is employed by Johns Hopkins University.

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