

## Asthma Facts Residents Living in Public Housing

*Asthma is a chronic disease that is associated with poor housing conditions. This disease is disproportionately prevalent among residents of public housing. Among the major contributors to asthma in public housing units are environmental factors “triggers”, such as indoor allergens caused by pest infestations.*

### General Information

- Asthma is one of the country’s most common diseases. In the United States 30.8 million people have been diagnosed with asthma. It is a common chronic childhood disorder, affecting an estimated 6.8 million children under the age of 18.<sup>1</sup>
- Each day 11 Americans die from asthma. There are more than 4,000 deaths due to asthma each year, many of which are avoidable with proper treatment and care. In addition, asthma is indicated as a “contributing factor” for nearly 7,000 other deaths each year.<sup>2</sup>
- Ethnic differences in asthma prevalence, morbidity, and mortality are highly correlated with poverty, urban air quality, indoor allergens, lack of patient education, and inadequate medical care.<sup>2</sup>
- Asthma is slightly more prevalent in African Americans than Caucasians. African Americans are 3 times more likely to be hospitalized and die from asthma. African American women have the highest asthma mortality rate of all groups, more than 2.5 times higher than Caucasian women.<sup>2</sup>
- Hispanics have lower rates of asthma than non-Hispanic Blacks and Whites. In 2002, over 1.7 million Hispanic Americans reported having asthma and 1.1 million experienced an asthma attack in the past year.<sup>2</sup>

### Public Housing

- According to unpublished data from a random-digit-dial telephone survey of Boston residents, 20% of adult public housing residents reported being told by a doctor that they currently have asthma compared to 9% of other city residents.<sup>11</sup>
- Among public housing residents, 22% of women and 15% of men reported having asthma. Rates were higher among Blacks (26%) than Hispanics (16%) or Whites (13%).<sup>11</sup>
- Rates of asthma were also higher among those born in the US (21%) than outside the US (10%), and among those with less than a high school education (24%).<sup>11</sup>
- Residents who lived in public housing developments (20%) and those who received rental assistance (20%) were equally likely to have asthma.<sup>11</sup>

### Children

- Asthma is the most common long-term childhood disease in the United States; hospitalizations and deaths for minority and low-income children are significantly higher than the general population.<sup>3</sup>
- Among children ages 5 to 17, asthma is the leading cause of school absences from chronic illness. It accounts for an annual loss of more than 14 million school days per year (approximately 8 days for each student with asthma) and more hospitalizations than any other childhood disease.<sup>2</sup>

- According to the Urban Institute, 25% of Hope VI (a program aimed to improve neighborhood conditions by revitalizing distressed public housing communities and assisting residents with moving to better housing in less distressed neighborhoods) households have a child with asthma; this is double the national estimate for all children.<sup>8,9</sup>
- Boston's Healthy Public Housing Initiative (HPHI) intervention study enrolled 78 children (64% Hispanic, 33% African-American) from three public housing developments in Boston found that 56% of the children had moderate persistent asthma, with 14% considered severe persistent, 10% mild persistent, and 20% mild intermittent. Only 36% of persistent asthmatics were prescribed any daily controller medication.<sup>4</sup>
- According to the HPHI study, 28% of the children's primary caregivers reported using the emergency room to address their child's ongoing asthma care, because they did not have a primary care provider.<sup>4</sup>
- A report from the National Low Income Housing Coalition (NLIHC) estimated that 40% of asthma diagnoses in children under 16 years of age are associated with residential exposures where "triggers" such as dust, mold, pests, household pets, cold air, and dry heat are often present.<sup>3</sup>

### **Adults**

- Poor adults, particularly those living in public housing, have higher asthma rates as a result of environmental factors as well as problems managing the disease once it has been diagnosed.<sup>9</sup>
- About 1 in 8 adults in the Hope VI Panel study sample reported having had an asthma attack in the past year, about three times the number of asthma attacks reported by a national sample of adults.<sup>9</sup>
- The Hope VI sample found that 8% of the panel had visited the emergency room or an urgent care center for an asthma attack, while less than 1 percent nationally had done the same.<sup>9</sup>

### **Social and Economic Factors**

- The annual direct health care cost of asthma is approximately \$14.7 billion; plus another \$5 billion in indirect costs (e.g. lost productivity) for a total of \$19.7 billion dollars. Prescription drugs represented the largest single direct cost, at \$6.2 billion.<sup>6</sup> The value of reduced productivity due to loss of school days represented the largest single indirect cost related to asthma, approaching \$1.5 billion.<sup>7</sup>
- For adults, asthma is the fourth leading cause of work absenteeism, resulting in nearly 15 million missed or lost workdays each year, with a total cost of nearly \$3 billion in total lost productivity.<sup>2</sup>
- In a North Carolina study of children living in substandard housing conditions the indirect asthmatic costs were approximately \$5.7 million in 2006.<sup>10</sup> Indirect costs are costs of lost productivity arising from parents' loss of time from work and lifetime earnings lost due to premature death of children from asthma.

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<sup>1</sup> National Institute of Environmental Health Sciences. *Asthma and Its Environmental Triggers* [Online]. Available: <http://www.niehs.nih.gov> [30 July 2008].

<sup>2</sup> Asthma and Allergy Foundation of America. *Asthma Facts and Figures* [Online]. Available: <http://www.aafa.org> [30 July 2008].

<sup>3</sup> HUD User Periodicals. *Safe at Home*. [Online]. Available: <http://www.huduser.org/periodicals/ResearchWorks/August04/index.html> [29 July 2008]

<sup>4</sup> Healthy Public Housing Initiative. *Health Care for Asthmatic Children in Public Housing*. [Online]. Available: <http://www.hsph.harvard.edu/hphi/pubs.htm> [29 July 2008]

<sup>5</sup> National Organization of African American in Housing. *Mouse Allergy Contributes to Inner-City Asthma Crisis*. [Online]. Available: <http://www.noaah.org/pest/p6.htm> [29 July 2008]

<sup>6</sup> American Lung Association. (April 2008). *Asthma in Adults Fact Sheet*. [Online]. Available: <http://www.lungusa.org> [5 August 2008]

<sup>7</sup> American Lung Association. Epidemiology and Statistics Unit, Best Practices and Program Services. *Trends in Asthma Morbidity and Mortality*, February 2002

- <sup>8</sup> The Urban Institute. (5 October 2004). *Health Woes Beset Residents from HOPE VI Public Housing*. [Online]. Available: <http://www.urban.org/url.cfm?ID=900748> [6 August 2008]
- <sup>9</sup> Harris, Laura, Kaye, Deborah. (2004). *How Are HOPE VI Families Faring Health?* 5: 1-7. Retrieved August 6, 2008 from the Urban Institute website.
- <sup>10</sup> North Carolina Housing Coalition. (2 May 2007). *The Economic Cost of Substandard Housing Conditions Among North Carolina Children*.
- <sup>11</sup> *Boston Behavioral Risk Factor Survey*. (2006). Partners in Health and Housing – Prevention and Research Center & Evaluation Office of the Boston Public Health Commission.