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Urban kids with asthma need more frequent check-ups, Hopkins study suggests

Because even mild asthma among young inner-city children appears to be more unpredictable than ever, four or more check-ups a year after diagnosis is a wise move as a hedge against dangerous flare-ups of wheezing and trips to the emergency room, according to a study from the Johns Hopkins Children's Center. Current asthma guidelines call for follow-up of one to six months after diagnosis, but six months may be too long for many patients, researchers report in the November issue of *Pediatrics*.

Hopkins Children's researchers studied 150 Baltimore City asthmatic children 2 to 6 years of age and were surprised to find that nearly half of those with the mildest asthma at their first visit had worsening symptoms as early as three months later. The changes were so serious that they required either new drugs or new doses.

We know asthma is an unstable disease, but we underestimated just how unpredictably it could behave over time, especially in inner-city kids, said researcher Hemant Sharma, M.D., a pediatric allergist at Hopkins Children's. Doctors and parents need to be more vigilant and schedule at least three-month check-ups even if the child appears to be doing fine.

The findings also suggest that pediatricians should shift their focus away from disease severity at diagnosis to disease control.

Asthma control appears to be a better barometer of a child's risk for a flare-up than is initial assessment of symptoms, a staple that many doctors use as their yardstick for treatment and follow-up, said lead investigator Gregory Diette, M.D., M.H.S., a lung specialist at the Johns Hopkins School of Medicine.

Asthma is the most common pediatric chronic illness, affecting 6.2 million children in the United States. Severe illness is most prevalent in inner-city children, doctors say, because of pollution,

poor access to regular health care and disproportionate exposure to allergens like mice and cockroaches as well as to dust, cigarette smoke and automobile fumes.

In the study, researchers found that children with poorly controlled disease were two to three times more likely than those with good control to end up at the doctor's office or in the emergency department with bad asthma symptoms in the three months following diagnosis.

The Hopkins scientists defined four levels of asthma control - mild intermittent, mild persistent, moderate persistent and severe persistent - determined by the frequency of coughing, wheezing, shortness of breath, waking up at night, use of rescue medications to stop an asthma attack and limitations on physical activity.

How often children needed medical attention for their symptoms varied greatly from one level to the next, researchers found, and each higher level of severity doubled a child's risk of emergency medical care.

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The study was funded by the Environmental Protection Agency and the National Institutes of Health. Other investigators, all from Hopkins: Elizabeth Matsui, M.D. M.H.S.; Peyton Eggleston, M.D.; Nadia Hansel, M.D., M.P.H.; and Jean Curtin-Brosnan, M.A.

Founded in 1912 as the children's hospital of the Johns Hopkins Medical Institutions, the Johns Hopkins Children's Center offers one of the most comprehensive pediatric medical programs in the country, treating more than 90,000 children each year. U.S. News & World Report ranks Hopkins Children's among the top three children's hospitals in the nation. Hopkins Children's is Maryland's only state-designated Trauma Service and Burn Unit for pediatric patients. It has recognized Centers of Excellence in 20 pediatric subspecialties including cardiology, transplant, psychiatric illnesses and genetic disorders. For more information, please visit:

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