



News Release

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ATS Press Room: 303-228-8473 (May 15-18)

Poster session time: 2:00-4:30 p.m. May 16

Location: Room 503-504 (Street Level), Colorado Convention Center

Visits to Asthma Specialists Delayed for African-American Children

ATS 2011, DENVER –African-American children are more likely to report previous emergency room visits, hospitalizations and need for intensive care unit (ICU) management for asthma than Caucasian children on their first visit to an asthma specialist, according to a study conducted by researchers at Johns Hopkins University. The study also indicated that African-American children have poorer lung function at their initial visit to an asthma specialist than their Caucasian counterparts.

The study will be presented at the ATS 2011 International Conference in Denver.

“Our study shows significant differences in levels of pre-existing illness exist between white and black children at the time of initial visit to an asthma specialist, suggesting a delay in receipt of specialist care,” said study author Sande Okelo, MD, assistant professor of pulmonary medicine at Johns Hopkins University.

“When children with asthma are doing poorly despite the best efforts of their primary care provider, national asthma guidelines recommend that these patients be referred to an asthma specialist,” added Dr. Okelo, who is also a pediatric pulmonary specialist at Johns Hopkins Children’s Center. “This disparity highlights the need to better identify and address the reasons for delayed presentation of African-American patients who would benefit from specialist care.”

To conduct their study, researchers enrolled parents of 224 children, including 124 Caucasian children and 80 African-American children, presenting to Johns Hopkins Children's Center for initial consultation for asthma and asked them to provide information on their child's current level of asthma control, as well as emergency department visits, hospitalizations and oral steroid use from the previous two-month period. Parents were also asked to provide medical history data, including lifetime total number of prior hospitalizations and intensive care unit stays. Children's lung function also was assessed.

Both groups had similar levels of recent and average total lifetime steroid use. Significant differences were observed for recent evidence of acute health care use, total number of hospitalizations and total number of ICU stays.

"At the first visit with the asthma specialist, African-American parents provided reports of their child's past asthma history that indicated they had experienced a greater burden from asthma than their Caucasian counterparts," said Dr. Okelo. "More specifically, African-American patients were more likely to have emergency department visits and hospitalizations, were more likely to require care in an intensive care unit, to have poorer lung function and to have less well-controlled asthma at the time of the first asthma specialist visit."

Despite some well-described racial disparities in other facets of asthma care, Dr. Okelo said these findings were still a bit unexpected.

"It was not anticipated that there might be delays in asthma specialist care for the sickest of children with asthma," he said. "In fact, it is assumed that the sickest of children are appropriately referred in a timely fashion to asthma specialists, regardless of race. These findings suggest that African-American patients are suffering longer from poorly controlled asthma than their Caucasian counterparts before being seen by an asthma specialist."

Dr. Okelo said the current study was part of a larger effort to establish a registry within the division of pediatric pulmonary medicine at Johns Hopkins to systematically collect relevant clinical information during routine patient visits using standardized patient surveys. Future studies may help researchers learn if care by an asthma specialist removes some or all of the disparities between African-American and Caucasian asthmatic children, and help them develop strategies to overcome the barriers that interfere with the referral process.

"We would like to confirm these findings in a larger patient population," Dr. Okelo said. "This study and future studies also may help to further clarify and standardize the criteria which should be used to determine which children should be referred to asthma specialists, and when those referrals need to occur."

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"Do Asthma Morbidity Disparities Exist Between Black And White Children Referred To Asthma Specialist Care?" (Session B101, Monday, May 16, 2:00-4:30 p.m., Room 503-504 (Street Level), Colorado Convention Center; Abstract 19727)

** Please note that numbers in this release may differ slightly from those in the abstract. Many of these investigations are ongoing; the release represents the most up-to-date data available at press time.*

Abstract 19727

Do Asthma Morbidity Disparities Exist Between Black And White Children Referred To Asthma Specialist Care?

Type: Scientific Abstract

Category: 02.03 - Disparities in Lung Disease and Treatment (BS)

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Abstract Body

Background: Asthma specialist care is recommended by national asthma guidelines for patients who are experiencing poor outcomes, although asthma specialist care is underused in some patient populations, including black children. One possible explanation for underuse of asthma specialist care is the occurrence of delays in referrals from primary care providers for some patients, such as black children.

Objective: The objective of this analysis is to compare asthma morbidity of black and white children newly referred to an asthma specialist setting to determine if disparities in morbidity exist.

Methods: Parents of children presenting for initial pulmonary consultation for asthma to Johns Hopkins University and enrolled in a clinic-based patient registry provided information on current level of asthma control, recent emergency department {ED} visits, hospitalizations, and/or use of prednisone within the prior 2 months, quality of life (Pediatric Asthma Caregiver Quality of Life Questionnaire {PACQLQ}) and lifetime total number of prior hospitalizations, intensive care unit (ICU) stays and courses of prednisone. Lung function was assessed in children able to perform spirometry (FEV₁ percent predicted; FEV₁/FVC) and/or fractional exhaled nitric oxide (F_ENO). Comparisons were tested using t-test, Wilcoxon Rank Sum or chi-squared.

Results: No differences in mean age or gender were observed between 124 white and 80 black children presenting for initial consultation ($p > .05$). Both groups had similar levels of asthma control, lifetime total of prednisone use, PACQLQ scores and FEV₁/FVC at the time of initial consultation ($p > .05$). Significant differences were observed for recent evidence of exacerbations, total number of hospitalizations, total number of ICU stays, FEV₁ and a subset of patients able to perform FENO ($p \leq .05$).

Asthma Outcomes Among New Outpatient Pulmonary Consultations by Patient Ethnicity			
Asthma Outcome	White patients (n = 124)	Black patients (n = 80)	p-value
Prednisone use in the prior 2 months	37%	51%	.05
ED visit in the prior 2 months	19%	32%	.03
≥1 lifetime hospitalizations	41%	64%	<.001
≥1 lifetime ICU admissions	11.5%	42%	.002
FEV1% predicted	97%	79%	<.001

Conclusions: Significant differences in prior asthma morbidity exist between white and black children at the time of initial presentation for asthma specialist care. This morbidity disparity highlights the need to better identify the reasons for delayed referrals of black patients who would benefit from specialist care. Such delayed referral may be a contributing factor to well-described ethnic disparities in asthma outcomes.