

# Asthma Initiative Helps Disadvantaged Children

BY SUSAN LONDON

FROM THE ANNUAL MEETING  
OF THE PEDIATRIC ACADEMIC SOCIETIES

VANCOUVER, B.C. — An initiative that promotes improved asthma education and care at the family and community levels has reduced health care use and morbidity among disadvantaged children with asthma in Boston, according to Dr. Elizabeth R. Woods.

Four years into the Community Asthma Initiative, there was an 81% reduction in the percentage of participating children with asthma-related admissions, a 65% cut in the percentage of children making emergency department visits, a 39% reduction in the percentage missing school because of asthma, and a 37% reduction in the percentage having limitations in physical activity because of the disease.

"The program demonstrates a successful model that can be developed and is starting to be replicated in Massachusetts as well as nationally," Dr. Woods said at the meeting. "It also promotes policy changes that substantially improve asthma education and care, including access to case management, home visits, and affordable medications."

The initiative targeted children from the four Boston neighborhoods with the highest asthma rates and the greatest health disparities. The children were identified through asthma-related ED visits or hospital admissions, or were referred by primary care providers.

They and their families received case management and home visits by providers who helped them develop individualized management plans, performed environmental assessments, and supplied products such as vacuum cleaners with high-efficiency particulate air (HEPA) filters and bedding casings. Providers also instructed families in pest control techniques and connected them to community resources.

The initiative also targeted the community (families, providers, and teachers) through an educational campaign. Advocacy efforts were launched to encourage payers to address prohibitively high copayments for asthma medications.

Dr. Woods and her colleagues evaluated the effects of the initiative by analyzing parental reports obtained at 6-month intervals and administrative data.

Results were based on 441 children who had received case management through the initiative, the majority of whom had also received home visits. They were 7.8 years old on average. Most were African American (48%) or Latino/Hispanic (45%), and had public health insurance (70%).

From baseline to 12 months, the proportion of children making asthma-related ED visits fell from 63% to 22%, hospital admissions due to asthma fell from 51% to 10%, and the proportion of children who missed school because of asthma dropped from 93% to 56%. The proportion of children who had physical activity limitations due to asthma dropped from 55% to 35%.

The proportion of children with an up-to-date asthma action plan increased by 71% (from 49% to 84%).

In logistic regression analyses that controlled for potential confounders, the children had significant 90%-100% reductions in the odds of each adverse outcome, noted Dr. Woods, a pediatrician at Children's Hospital Boston.

In the initiative's first year, the cost of care per child was similar to that in a con-

trol neighborhood (\$1,335 vs. \$1,340). In the second year, it was approximately half as expensive in the initiative group (\$750 vs. \$1,322).

"There was clearly a cost saving, giving a return on investment of 1.46. ... That's a return on investment not to hospitals, but to insurance companies and society at large," Dr. Woods said.

The initiative is helping families in two main ways. "No. 1, it is helping

them understand their medications," she said, as many families are found to have bags and boxes of medications and a poor grasp of which ones to use in which circumstances. "The other big improvement relates to the environmental issues. Very few of these families had even a vacuum cleaner, let alone ones with HEPA bags and filters. These are incredibly helpful and much less costly than additional medication." ■

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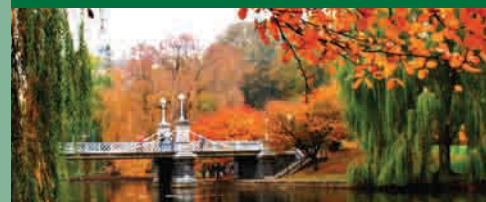
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