Model for managing asthma in preschoolers leads to dramatic drop in ER visits and hospitalizations

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Nearly one in eleven (8.6%) preschool children in the U.S. has been diagnosed with asthma and in some inner city neighborhoods, the figure is closer to one in seven. But, few asthma management programs are designed for parents of preschool children. The Asthma Basics for Children (ABC) program, established by Columbia University's Mailman School of Public Health and a coalition of community service organizations, educators, parenting programs, and community pediatric providers, addressed this need with a multi-layered approach that offers educational activities to parents and children in 31 Northern Manhattan daycare centers as well as training to community pediatric providers.

Following participation in the program, 85% percent of parents reported reducing their child's asthma triggers. The percent of children with asthma-related visits to emergency departments declined sharply from 74% to 47%, as did asthma-related hospitalizations, dropping from 24% to 11%.

Full study findings are published in the February 2011 *Journal of Urban Health*.

The ABC Program provided multiple opportunities for parents to learn about asthma signs and triggers in health units at the daycare centers. The multi-level intervention involved social workers, peer counselors and trained health educators, as in other community-based asthma

coalitions ; but also promoted parent participation by offering flexible workshop scheduling; reinforcing messages to parents through daycare center activities for their children; and adding a provider-education component to improve communication between parents and providers. The Columbia researchers found that parent participation rates in the study exceeded rates found in most other preschool or school-based asthma programs.

"Although emergency room visits and hospitalization rates for this age group are more than twice that of older children with asthma, until we developed the ABC model, only a handful of programs had been designed to promote better asthma management by their parents," said Sally P. Findley, PhD, first author on the paper. "Our study suggests that the benefits of such a program are huge."

The study also found that over a two-week period the percentage of children reporting any daytime symptoms dropped from 78% to 42%, any nighttime symptoms fell from 81% to 49% during one month, and any daycare absences declined from 56% to 38% in the previous six months.

Another key element of the ABC strategy was linking asthma education activities in the daycare setting with improving the quality of asthma care by healthcare providers. Parents in this program confided that they were often reluctant to share concerns with their physician, especially about possible side effects of daily use of medications to control asthma. After participating in the program, 89% found it easier to talk to their doctor, and 80% said they were confident in their ability to manage their child's asthma. In the group without parent training, only 31% had taken at least one step toward reducing triggers, 49% reported that talking to their child's doctor was easier, and 49% expressed confidence in managing their child's asthma. When parents participated in the program, those reporting these behaviors increased to 40%, 62%, and

71%, respectively. Children with both parents and healthcare providers reported the greatest increases in these behaviors: 76%, 82%, and 86%, respectively. The two-pronged strategy of strengthening communication skills of parents and their child's healthcare provider is likely to have contributed to the changes in asthma management behaviors, improved confidence, and improved asthma control, observes Dr. Findley.

Asthma control outcomes improved progressively as the child's exposure to ABC's multi-layered interventions increased. "This study show that you can improve asthma outcomes for preschoolers with an approach that integrates activities for children, parents, teachers, and healthcare providers, noted Dr. Findley, clinical professor of Sociomedical Sciences and Population and Family Health at the Mailman School. "The greatest impact occurs when you combine education interventions at all of these levels."

Provided by Columbia University

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