# Look Beyond Asthma in Assessing Absenteeism

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HONOLULU — Insight into what's happening at home may help to explain behavior problems and school absenteeism in children with asthma, according to studies presented at the annual meeting of the Pediatric Academic Societies.

Researchers from the University of Rochester (N.Y.) studied sleep-disordered breathing in children with asthma in an attempt to find possible links to problem behavior issues that have previously been reported in this patient population.

The associations were powerful, with serious behavioral problems documented in twice as many asthmatic children with sleep problems as in those with asthma alone, reported Maria Fagnano, health project coordinator for the department of pediatrics at the university.

A second and unrelated study explored school absenteeism among children with asthma and found that parental chronic disease plays a role in how children's health is perceived and in how many school days they miss, regardless of asthma severity.

The New York study enrolled 194 inner-city children aged 4-10 years, with physician-diagnosed asthma, who attended a school-based asthma program.

Parents were administered a 28-item validated questionnaire on behavioral issues (the Behavior Problem Index or BPI) and a 22-item validated questionnaire on sleep patterns, the Sleep-Related Breathing Disorder Subscale.

Most of the children were male (56%); African American (66%) or Hispanic (26%); and on Medicaid (73%). Their average age was 8 years. Prior testing had revealed that almost one-third of their parents suffered from depression.

One-third of the children had sleep scores highly predictive of sleep-disordered breathing, which can range from snoring to sleep apnea, said Ms. Fagnano. Girls and children with high body mass indexes were at higher relative risk of elevated sleep-disordered breathing scores than were other children with asthma enrolled in the study.

Nearly the same percentage—32% of children—scored above a 14 on the Behavior Problem Index, a range considered to be indicative of behavior problems serious enough that they might warrant professional intervention.

Twice as many children with high sleep-disordered breathing scores—48%—earned elevated scores on the BPI than did those with normal sleep scores, 24%.

Among problem behavior subscales, independent correlations were found between children with elevated sleep-disordered breathing scores and internalizing behavior problems, externalizing behavior problems, anxious or depressed behavior, headstrong behavior—and, in a separate linear regression analysis, hyperactive behavior.

"A large proportion of urban children with asthma have sleep-disordered breathing, and poor sleep is independently associated with behavior problems," said Ms. Fagnano. "Screening for sleep-disordered breathing among high-risk populations might help to identify children who could benefit from further interventions."

The second study examined data from 561 parent/child dyads surveyed as part of the nationally representative 2003 National Health Interview Survey, Dr. Ellen A. Lipstein reported at the meeting.

All of the children, aged 5-17 years, had been diagnosed with asthma by a physician, and 39% of their parents reported being diagnosed with a chronic disease such as heart disease, emphysema or asthma, diabetes, or arthritis.

No difference was seen in inhaler use by children of parents with or without chronic disease.

When researchers controlled for other factors, including measures of childhood asthma severity, parents with chronic disease were three times less likely to judge their children's health as excellent or very good, and their children missed, on average, 1.3 more days of school during the previous year.

"These findings suggest that parental chronic disease may lead to increased perceptions of child medical vulnerability," said Dr. Lipstein of the Harvard Medical School and the Massachusetts General Hospital center for child and adolescent health policy, both in Boston.

"Furthermore, the increased absenteeism suggests that parents with chronic disease not only perceive [greater] child vulnerability, but they act on these perceptions," she said. ■