

# Asthma Guidelines Said to Misguide Tx in Children

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RANCHO MIRAGE, CALIF. — Current asthma guidelines, widely promoted to encourage more aggressive asthma management, actually result in missed diagnosis and undertreatment for children with asthma, Joseph D. Spahn, M.D., said at a pediatric pulmonology meeting sponsored by the American College of Chest Physicians.

Compared with adults who have asthma, children tend to have a much better forced expiratory volume in 1 second (FEV<sub>1</sub>) for the severity of their asthma, and to have more irritable airways.

These differences have never been adequately addressed in the National Asthma Education and Prevention Program guidelines, which are promulgated by the National Heart, Lung, and Blood Institute, said Dr. Spahn, formerly the medical director of the childhood asthma manage-

ment program at National Jewish Medical and Research Center, Denver, and now in private practice in Sacramento.

The guidelines' system of classifying asthma severity as mild, moderate, or severe, which then determines suggested treatment, was a convention adopted for practicality, not because there are evidence-based distinctions, Dr. Spahn said.

"It was basically a consensus decision among the experts, one that was largely based on the experience of adult-trained

individuals. ... That's the problem," Dr. Spahn said. "We all know that asthma is a disease that has a natural history. Asthma in a 4-year-old is much different from asthma in a 14-year-old, and that disease is much different in an adult with a 34-year-old history."

The guidelines, which were first introduced in 1991, define lung function in severe asthma as an FEV<sub>1</sub> less than 60% of predicted FEV<sub>1</sub>, moderate asthma as 60%-80% of predicted, and mild asthma as 80%-100% of predicted.

But major studies have shown that few children with asthma have an FEV<sub>1</sub> less than 80% of predicted, and almost none have an FEV<sub>1</sub> less than 60%, despite the fact that many children do have severe, often brittle, asthma that can be difficult to control, Dr. Spahn said.

In one study, which recorded the FEV<sub>1</sub> of 3,452 children with asthma for 15

years, 94% of the children had an FEV<sub>1</sub> that was 80% or better, and less than 1% had an FEV<sub>1</sub> below 60% predicted.

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In the influential Childhood Asthma Management Program study, which established the utility of inhaled corticosteroid management in

moderate asthma, the mean prebronchodilator FEV<sub>1</sub> of the subjects was 94% predicted.

In a recent comparison done at National Jewish Medical and Research Center, 23% of more than 12,000 adult asthmatic patients seen at the center had an FEV<sub>1</sub> less than 60% predicted, but less than 5% of 2,700 children did. Moreover, 74% of the children had an FEV<sub>1</sub> that was greater than 80% predicted, and National Jewish Medical and Research Center is a referral center that tends to see the most severe or problematic patients, Dr. Spahn noted at the meeting, which was also sponsored by the American Academy of Pediatrics.

Other studies have shown that even children with an FEV<sub>1</sub> that is 100% of predicted or better can still have a 20%-30% chance of a serious asthma attack every year.

Clinically better measurements for childhood asthma severity are the FEV<sub>1</sub>/FVC (forced vital capacity) ratio and forced expiratory flow<sub>25-75</sub> (during the middle half of the FVC), Dr. Spahn asserted. Both measures have greater sensitivity in children, as both have been shown to fall as severity increases.

Serial spirometry may also be more helpful than a single measurement, he added.

"The lung-function cut points have to be totally revamped, in my opinion," Dr. Spahn said. "We have to stress the episodic nature of this illness, especially in children." ■

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