

New Tool Helps Children Get Asthma Under Control

APRIL 13, 2007

DENVER —

Patients often don't realize they can feel better, do more

A simple, new questionnaire can identify children with poorly controlled asthma who needlessly suffer asthma symptoms that limit their daily activities. Associate Professor of Pediatrics Andy Liu, MD, and his colleagues describe the development of the test and research demonstrating its validity and clinical utility in the April issue of the *Journal of Allergy and Clinical Immunology*.

"Many patients needlessly limit their exercise, awaken at night and miss school or work because of poorly controlled asthma," said Dr. Liu. "The seven questions in the Childhood Asthma Control Test can help identify these patients so that their parents and doctors can work to improve their asthma management."

Recent studies have shown that many asthma patients mistakenly believe they have their asthma under control. In a poll by the Asthma and Allergy Foundation of America, almost 90 percent of parents thought their children's asthma symptoms were under control, but half the children missed school or work, half were unable to complete exercise programs, and 45 percent were awakened at night by asthma symptoms.

"We have the tools to control asthma and normalize the lives of most patients," said Dr. Liu. "We need patients, parents and doctors to recognize uncontrolled asthma so that they will better use the tools available."

An Asthma Control Test for patients 12 and older was developed first to address this problem. More recently, a panel of pediatric asthma experts convened to develop a simple, valid test for children 4 to 11 years old.

After interviews with 20 children with asthma and their parents, the experts compiled a 21-item questionnaire that was given to 344 patients with asthma and their caregivers. Pediatric asthma specialists also rated those patients' asthma control, using detailed medical histories and breathing tests. Statistical analysis then helped whittle the 21 questions down to seven whose combined answers most closely correlated with the experts' evaluations.

Children are asked to answer the first four questions, with help from their parents. They include questions about the child's asthma on the day the test is taken, and whether asthma causes the child to cough or wake up at night, and whether it is a problem when they run or play sports.

"Parents often underestimate the effect asthma has on a child, especially during the day and with exercise," said Dr. Liu. "In addition to their primary goal of evaluating asthma control, these questions can open a valuable dialogue between parent and child about asthma."

Caregivers answer the final three questions, which address daytime symptoms, nighttime awakening and wheezing during the previous month.

Each question offers several answers, which are scored on a scale of 0 to 5. Patients whose combined score is 19 or less, in a range of 0 – 27, are deemed to have asthma that is not well controlled, and are advised to talk to their physician about their asthma.

"A patient and caregiver can fill out this simple questionnaire while waiting to see a doctor," said Dr. Liu. "They can then give the doctor the completed test, which quickly and reliably tells the doctor if the patient's asthma is under control or needs attention."

Statistical analysis of the validity of the Childhood Asthma Control Test indicated that it correlated well with experts

ratings of asthma control and the need for change in therapy. It correctly identifies 74 percent of children whose asthma is considered well controlled by experts and 68 percent of those whose asthma is considered poorly controlled by experts.

The development of the test was funded by the pharmaceutical company GlaxoSmithKline, which makes the asthma medication Advair[®]. Online versions of both the adult and childhood Asthma Control Test are available at www.asthmacontrol.com.

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