Of patients referred to leading respiratory hospital, 1 in 4 don’t have asthma; 70 percent under-diagnosed

DENVER — It's estimated that more than 26 million Americans have been diagnosed with asthma, but there is growing concern that many are being misdiagnosed or under-diagnosed and may be suffering from untreated conditions.

“It's very logical for general practitioners to assume most breathing problems are asthma, especially in children,” said Tod Olin, MD, MSCS, a pediatric pulmonologist at National Jewish Health. “But there are a lot of breathing problems out there, and for children who are failing therapy, we need to think about those other diagnoses.”

Dr. Olin says “asthma” is often used as an umbrella term to describe a wide variety of breathing disorders. “In reality, there are many conditions that can mimic the symptoms of asthma, and we need to make sure we have the correct diagnosis before deciding on a course of treatment,” he said. Allergies, acid reflux and even heart problems all can share common symptoms of asthma and, in some cases, may be overlooked.

After struggling with traditional therapies, thousands of asthma patients have been referred to specialists at National Jewish Health, the leading respiratory hospital in the nation, for more than a century. Many patients have complex conditions and are referred to the experts at National Jewish Health only after seeing other doctors and failing several therapies. But a recent analysis of many of those referrals brought to light some troubling trends.

Between 2005 and 2008, one out of four asthma patients referred to National Jewish Health didn't have asthma at all. Another 70 percent had other conditions in addition to asthma that were undiagnosed and were not being properly treated.

“That is really eye-opening,” said Dr. Olin. “We spend a lot of time and resources treating people for asthma in this country, and for some it's just the wrong diagnosis,” he said.

In fact, according to the Centers for Disease Control and Prevention, asthma costs a staggering $56 billion each year in the U.S. That's more than a billion dollars a week.

“We've found by making the right diagnosis and prescribing the right treatment we can make a huge difference, both in terms of costs and in the quality of life for those patients,” said Dr. Olin.

By re-evaluating the asthma patients referred to them, doctors at National Jewish Health were able to more accurately diagnose breathing problems and prescribe more appropriate therapies. In doing so, they cut hospitalizations in half, decreased the symptoms children experienced during sports by half, and cut the number of missed school days by about 20 percent.

That can make a big difference in the lives of patients like Jack Robb, a teenage runner who competes at a national level. After experiencing breathing problems, Robb was diagnosed with exercise-induced asthma and was prescribed an inhaler to help control it. “The medicine worked for about two weeks,” said Robb, “then my body started to reject it.”
After his symptoms persisted, Robb was referred to Dr. Olin. “I immediately suspected that Jack might not even have exercise-induced asthma or, if he did, that it wasn't a complete diagnosis,” said Dr. Olin.

Sophisticated tests proved Dr. Olin was right. Using a camera to monitor his vocal cords during exercise, doctors diagnosed Robb with vocal cord dysfunction (VCD), meaning that his voice box tends to close during periods of intense exercise. It’s not asthma and cannot be fixed with asthma medicine.

“In cases like these, in fact, speech therapists are often used,” said Dr. Olin, “and in some cases, sports psychologists are hugely important, because they can really tap into the psyche of the athlete and help resolve these breathing problems.”

It worked for Jack, though he never thought the root of his problem would be more psychological than physical. “Without that test, we would still be guessing,” he said.

Dr. Olin says if you have a child who is taking medicine for asthma and still has symptoms more than twice a week or who has been hospitalized for breathing problems, you may want to see a specialist for a re-evaluation. “Those are signs there may be something more,” said Dr. Olin, “and the right diagnosis can make all the difference.”

View an infographic on athletes and asthma.

**National Jewish Health** is the leading respiratory hospital in the nation. Founded 125 years ago as a nonprofit hospital, National Jewish Health today is the only facility in the world dedicated exclusively to groundbreaking medical research and treatment of children and adults with respiratory, cardiac, immune and related disorders. Patients and families come to National Jewish Health from around the world to receive cutting-edge, comprehensive, coordinated care. To learn more, visit the [media resources](#) page.

**Media Resources**

We have many faculty members, from bench scientists to clinicians, who can speak on almost any aspect of respiratory, immune, cardiac and gastrointestinal disease as well as lung cancer and basic immunology.

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