buterol, yellow-zone management, and/or prednisone/predlone treatment was recorded. After the initial symptom-based diagnosis, a pulmonary-function test was performed by using spirometry measurements. The clinician concluded the visit by making a final assessment of asthma or upper respiratory infection and assigned a final treatment plan that was based on standardized asthma plans.

RESULTS. The most frequently reported physical symptom was general coughing (73.2%), followed by nighttime cough (50.0%), wheezing (35.7%), and trouble sleeping because of cough (21.4%). Approximately two thirds of the patients in this population had abnormal values of forced expiratory volume in 1 second. Physicians changed 30.4% of the patients’ treatment plans after viewing spirometry results.

CONCLUSIONS. Spirometry is an objective tool that can help prevent misclassification of asthma severity and inappropriate use of asthma medication among pediatric patients with asthma. The use of spirometry made an impact in asthma diagnosis at this inner-city clinic: nearly one third of the patients had their treatment plans changed after the spirometry results were viewed.

REVIEWER COMMENTS. The emphasis of this study was to examine the impact of spirometry results on physician behavior in the acute setting. It demonstrates that when clinicians follow the National Asthma Education and Prevention Program guidelines for recommended spirometry use, there were considerable differences in recommendations for treatment. Ensuring appropriate diagnosis cannot solely rely on patients’ signs and symptoms; thus, pediatricians should consider spirometry in asthmatic children.

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The Influence of Pulmonary Function Testing on the Management of Asthma in Children

PURPOSE OF THE STUDY. To assess how preevaluation pulmonary-function tests (PFTs) influenced management decisions in children with asthma, beyond what was obtained from history and physical examination alone.

STUDY POPULATION. Children with asthma (N = 367) aged 4 to 18 years.

METHODS. Physicians and nurse practitioners in the outpatient pulmonary office evaluated the children and made initial treatment recommendations before reviewing the specific spirometry results. Any changes based on the test results were documented.

RESULTS. Spirometry results were abnormal in 45% of the visits, related to underlying asthma severity but not to clinical findings. PFT results changed management decisions in 15% of the visits. This frequency was not affected by the patient’s age, disease severity, symptom control, or examination findings. When spirometry results did not change treatment decisions, the provider was more likely to maintain therapy (58%) than to increase (17%) or decrease (24%) therapy. In contrast, when spirometry results did change treatment decisions, the provider was more likely to increase therapy (75%) than to maintain (20%) or decrease (5%) therapy.

CONCLUSIONS. Without PFTs, providers often overestimated the degree of asthma control. This incorrect assessment could have resulted in suboptimal therapy.

REVIEWER COMMENTS. This was a very practical clinical study that addressed a common clinical scenario that physicians who treat asthma face daily in clinical practice. Ideally, the patient’s presenting clinical history, physical examination, and PFT result should all be factored into the final clinical decision regarding asthma therapy. The data from this investigation demonstrate that spirometry results were abnormal in almost one half of the visits, and this was related to underlying asthma severity and not clinical findings. When the spirometry results did not enter into the management decision, therapy was generally maintained; however, when spirometry results were factored in, the provider was more likely to increase therapy. With this in mind, proper interpretation of PFT data should help prevent overestimation of the degree of asthma control and help prevent suboptimal therapy. An obvious extension of this investigation would be the examination of serial PFTs in patients with asthma to identify clinically relevant trends in these data to assist in the best possible decision-making regarding ongoing asthma therapy and control.

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Predictors of Early Hospital Readmission for Asthma Among Inner-City Children

PURPOSE OF THE STUDY. To identify modifiable predictors of early readmission in inner-city children with asthma.

STUDY POPULATION. All pediatric patients aged 0 to 21 years who were discharged with a primary diagnosis of asthma during the study period were identified from a single hospital. Case patients were those who were readmitted with asthma within 30 days of discharge, and controls were those who were not readmitted. A total of 152 case patients and 293 controls who met the inclusion criteria were used in this study.

METHODS. Medical chart reviews were performed on the selected patients. Information was collected on demo-
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