buterol, yellow-zone management, and/or prednisone/ 
prenalone treatment was recorded. After the initial symp-
tom-based diagnosis, a pulmonary-function test was per-
formed by using spirometry measurements. The clinician 
concluded the visit by making a final assessment of asthma 
or upper respiratory infection and assigned a final treat-
ment 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 
(50.0%) of the patients 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 inap-
propriate use of asthma medication among pediatric pa-
tients with asthma. The use of spirometry made an im-
pact 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 exam-
ine the impact of spirometry results on physician behavior 
in the acute setting. It demonstrates that when clinicians 
follow the National Asthma Education and Prevention Pro-
gram 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 
Nair SJ, Daigle KL, DeCuir P, Lapin CD, Schramm CM. 

PURPOSE OF THE STUDY. To assess how preevaluation pulmo-
nary-function tests (PFTs) influenced management deci-
sions in children with asthma, beyond what was ob-
tained 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 out-
patient pulmonary office evaluated the children and 
made initial treatment recommendations before review-
ing 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 deci-
sions in 15% of the visits. This frequency was not af-
fected by the patient’s age, disease severity, symptom 
control, or examination findings. When spirometry re-
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 physi-
cians 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 in-
crease 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 
Reznik M, Hailpern SM, Ozuah PO. J Asthma. 2006;43: 
37–40

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-
Predictors of Early Hospital Readmission for Asthma Among Inner-City Children
Michelle Macy and Harvey L. Leo

Pediatrics 2007;120;S136
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Predictors of Early Hospital Readmission for Asthma Among Inner-City Children
Michelle Macy and Harvey L. Leo
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