Implementation of an Asthma Predictive Index in a General Pediatric Clinic

Introduction

Asthma diagnosis in children under the age of 5 can be difficult and is not clearly defined by current guidelines. Wheezing episodes are commonly an initial indicator of asthma, but among this population there is a high frequency of viral-induced wheezing as well. Differentiating between the causes of these wheezing episodes can be difficult. Both the modified asthma predictive index (mAPI) and the pediatric asthma risk score (PARS) were developed to assist providers in identifying young patients at risk for asthma.

Methods

This retrospective chart review evaluated patients aged 3 for a 17-month time period who had an ICD-10 code for wheezing. Data was collected via electronic health records and assessed for relevancy in predicting child risk for asthma by utilizing the mAPI and PARS criteria.

Results

A total of 35 patients were identified to have had a wheeze episode that were seen at the Danis Pediatric Center clinic. Of these, 19 patients had an existing asthma diagnosis. Six patients met mAPI criteria and five had an asthma diagnosis. mAPI criteria correctly classified 20 patients and incorrectly classified 15 patients. Sixteen patients met PARS high risk criteria and eleven had an existing asthma diagnosis. PARS high risk criteria correctly classified 22 patients and incorrectly classified 13 patients. Eight of the 19 patients diagnosed with asthma had a current inhaled corticosteroid prescription.

Conclusion

A small difference was identified in the accuracy of mAPI criteria and PARS high risk criteria in correctly classifying patients with an asthma diagnosis in children aged 3. PARS high risk criteria capture a larger percentage of patients who carried an asthma diagnosis and captured a substantial percentage who were at increased risk but did not yet carry a diagnosis. The PARS high risk criteria would be a useful diagnostic tool to assist physicians in accurately identifying patients at risk for asthma.