VALIDATION OF CLAIMS-BASED PERSISTENT ASTHMA SEVERITY CLASSIFICATION
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OBJECTIVE: This study was designed to validate an established claims-based persistent asthma severity classification using clinical parameters abstracted from medical charts. METHODS: Patients with asthma, aged 6–64 years, were selected from a claims database (1999–2005) of a medical group practice organization located in central Massachusetts. Patients had persistent asthma defined using an established algorithm; no chronic obstructive pulmonary disease; and at least one procedure code for spirometry. All recorded pre-bronchodilator values of FEV1 or PEF, height, and weight were extracted from medical charts. Patients’ asthma severity was categorized based on two methods: an established claims-based algorithm and guidelines classification algorithm based on clinical parameters. Gamma rank correlation index was used to measure the association between the two severity categorization methods. One year total and asthma-related costs for each severity category were also compared between the two different approaches. RESULTS: Based on claims-based severity classification, 41% of 368 patients in the study sample had mild persistent asthma, 33.7% had moderate, and 25% had severe. Using clinical parameters (% predicted FEV1 or PEF value), 68.2% of patients had mild, 23.9% had moderate, and 7.9% had severe persistent asthma. The correlation between the two classification approaches was statistically significant ($P = 0.0002$). Patients with higher severity generally had higher costs. Comparing the two classification approaches, patients with moderate persistent asthma using the clinical parameters approach had significantly higher asthma-related direct costs ($2395$) than those classified as having moderate persistent asthma using the claims-based approach ($1604$). There were no significant asthma-related cost differences in mild and severe asthma categories. CONCLUSION: While more patients were classified into higher severity level using a claims-based classification approach than clinical parameters, the two classification methods exhibited significant association. The claims-based algorithm can be helpful in economic studies in asthmatic patients where classifying asthma severity using claims is needed.

PRETENSIONS FOR ONSET OF EFFECT OF COMBINATION MAINTENANCE MEDICATION AMONG ASTHMA PATIENTS
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OBJECTIVE: To estimate patient preferences for improvements in onset of effect of asthma combination maintenance medications. METHODS: The Onset-of-Effect Questionnaire (OEQ) is a self-administered instrument used to assess patient satisfaction with how quickly asthma maintenance medications begin to work. The OEQ elicits subject ratings for five statements: “I could tell the medication was working” (Medication Works), “I could feel the medication begin to work right away” (Works Right Away), “I felt physical sensations shortly after taking the medication that reassured me it was working” (Physical Sensations), “The medication worked as quickly as my rescue medication” (Rescue), and “I was satisfied with how quickly I felt the medication begin to work” (Satisfied). Asthma patients, 18 years and older, currently using combination maintenance therapy, completed an online survey instrument that included 10 stated-choice trade-off tasks. Subjects chose among pairs of hypothetical medication alternatives, each defined by responses by “people like you” to the five OEQ statements and monthly out-of-pocket cost, or their current treatment. We used mixed-logit methods to estimate dollar value-to-patient (VTP) per month for various improvements in maintenance-medication onset of effect. RESULTS: A total of 509 subjects completed the survey. Responses demonstrated a high level of internal validity. “Satisfied” was the most important attribute and “Physical Sensations” the least important attribute. Improvement from “Strongly Disagree” to “Strongly Agree” on Works Right Away was preferred by 62% (95% CI: 57–67%) of patients. Improvement from “Strongly Disagree” to “Strongly Agree” on Satisfied was preferred by, 80% (95% CI: 75–85%) of patients with a mean VTP (95% CI) of $20 ($17–$24). CONCLUSION: The results of this study demonstrate that onset of effect, particularly patients’ ability to feel the medication begin to work right away and patients’ satisfaction with how quickly they feel the medication being to work, are of significant value to asthma patients.