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Poster Abstract Submission Page (DATA)

Title: ASTHMA CONTROL TEST SCORE IS ASSOCIATED WITH ECONOMIC OUTCOMES AMONG U.S. PATIENTS WITH ASTHMA

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Background: The Asthma Control Test (ACT) is a standard validated questionnaire for assessment of asthma control. The relationship between asthma control and economic outcomes warrants further clarification.
The study objective was to analyze the relationship between asthma control, as measured by ACT scores, and direct and indirect costs associated with healthcare resource utilization (HRU) and work productivity in patients with asthma using a nationally representative patient-reported survey.

Methods: Patients aged ≥18 years with a self-reported physician diagnosis of asthma were identified from the 2015–2106 U.S. National Health and Wellness Survey, a patient-administered, internet-based questionnaire. Patients were grouped into different levels of asthma control using the ACT score (≤15: poorly-controlled; 16–19: partly-controlled; 20–25: well-controlled asthma). The Work Productivity and Activity Impairment-General Health Scale (WPAI-GH v2.0) and patient-reported health resource utilization (HRU; including healthcare provider visits, emergency room visits, and hospitalizations in the previous 6 months) were used to derive indirect and direct healthcare costs, respectively. Generalized linear models examined differences in economic outcomes by ACT scores, controlling for covariates.

Results: Overall, 1,360 (17.4%), 1,572 (20.1%), and 4,888 (62.5%) patients had ACT≤15, 16–19, and 20–25, respectively. Mean work impairment was higher ($p<0.001$) in patients with ACT≤15 (44.65%) or 16–19 (31.96%) versus patients with ACT=20–25 (19.12%). All HRU outcomes were also higher for patients with ACT≤15 and 16–19 compared with patients with ACT=20–25 ($p<0.02$ for all outcomes). Mean indirect and direct costs were significantly higher for patients with ACT≤15 ($14,764, $p<0.001$ and $15,262, $p<0.001$) and ACT=16–19 ($10,448, $p<0.001$ and $8,554; $p=0.001$) versus patients with ACT=20–25 ($6,353 and $6,012).

Conclusion: Lower ACT scores were associated with greater HRU and work productivity loss. Interventions to address asthma control may result in direct and indirect cost savings.