

Community Asthma Initiative: Evaluation of a Quality Improvement Program for Comprehensive Asthma Care


**PURPOSE OF THE STUDY.** To evaluate the cost-effectiveness of a quality improvement (QI) program in decreasing asthma emergency department (ED) visits, hospitalizations, limitation of physical activity, patient missed school, and parent lost work.

**STUDY POPULATION.** Urban, low-income patients with asthma from 4 Boston-area zip codes were determined through records of ED visits or hospitalizations.

**METHODS.** The selected families were given the option of increased care encompassing nurse care management and home visits. QI assessment centered on parent interviews at enrollment and at 6- and 12-month contacts. Administrative hospital information was used to evaluate ED visits and hospitalizations at enrollment and 1 to 2 years after enrollment. Hospital expenditures of the program were compared with hospital expenditures of a comparable neighboring community.

**RESULTS.** The program serviced 283 children (55% male; ~40% African American, 52% Latino; 73% received Medicaid; 71% had household income <$25 000). The 12-month results demonstrated significant decline in any (≥1) asthma ED visits (68%), hospitalizations (85%), days of significant physical limitation (42.6%), missed school (41%), and parent lost work time (49.7%) ($P < .0001$ for all). There was a significant decline in hospital expenditures compared with comparable community costs ($P < .0001$), and the investment return was calculated at 1.46.

**CONCLUSIONS.** The study program generated enhanced health outcomes and cost-effectiveness and provided knowledge that will guide future advocacy to finance comprehensive asthma management.

**REVIEWER COMMENTS.** Despite the limitations of this study, which was not randomized and did not have comparable hospital administrative data on controls, the community asthma program provided a cost-effective home chronic care model. This model of a medical home is a culturally sensitive program conjoining case management and home visits to facilitate the management of patients who require a higher level of care to achieve better control of their asthma.

Parent Misperception of Control in Childhood/Adolescent Asthma: The Room to Breathe Survey


**PURPOSE OF THE STUDY.** To compare parent and child subjective assessments of asthma severity and control by using validated measures such as the Childhood Asthma Control Test (C-ACT) and the Scottish Intercollegiate Guidelines Network/British Thoracic Society (BTS) definitions of control.

**STUDY POPULATION.** Families ($N = 1284$) with a child who had physician-diagnosed asthma who lived in Canada, Greece, Hungary, Netherlands, United Kingdom, or South Africa were included in this cross-sectional survey.

**METHODS.** Families were interviewed by using a telephone survey, which included the C-ACT and Global Initiative for Asthma (GINA)/BTS guidelines and subjective questions on asthma symptoms, severity, and control.

**RESULTS.** Overall, 34.9% of children/adolescents reported a severe asthma attack requiring oral corticosteroids or hospitalization; >50% of the children had awakened at night at least once due to their asthma in the past 4 weeks and two-thirds of the children had used reliever medication in the past 4 weeks. Thirty-three percent of the parents described their child’s asthma as intermittent, 39.9% as mild, 21.1% as moderate, and 6% as severe. Forty percent of subjects had a C-ACT score $<19$ (indicating poor control); 85% of children/adolescents had incompletely controlled asthma as defined according to GINA guidelines. Thirty-eight of 42 children who described their asthma as “very bad” had poor asthma control according to GINA guidelines; there was poor agreement between parents’ and children’s scores ($\kappa$ score: 0.119).

**CONCLUSIONS.** Parents often overestimate their child’s asthma control as measured by the comparison between the telephone survey questionnaire and the C-ACT and GINA or BTS/Scottish Intercollegiate Guidelines Network guidelines. The child’s self-reporting of asthma severity showed a stronger correlation with guideline-defined asthma control than the parent’s reporting of the child’s asthma severity.

**REVIEWER COMMENTS.** These results underscore a common clinical observation, that asking parents to assess a child’s asthma status might paint a falsely positive picture. The authors suggest that parents might have difficulty recognizing their child’s asthma symptoms. Thus, these results should encourage clinicians to assess control with pediatric patients by directly asking the child about asthma symptoms, administering validated questionnaires such as

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