IMPLEMENTATION OF EVIDENCE BASED GUIDELINES FOR PAEDIATRIC ASTHMA MANAGEMENT IN A TEACHING HOSPITAL


Purpose of the Study. To evaluate a systemic and coordinated approach to the development and implementation of evidence-based asthma guidelines for a pediatric hospital.

Study Population. This was a comparative study conducted at the Royal Children’s Hospital in Melbourne, Australia. There were 3 cohorts of children evaluated between the ages of 2 and 18 years who presented with acute asthma to the emergency department. Cohort 1 presented before the development of asthma guidelines, cohort 2 was recruited to assess the effectiveness of guideline implementation, and cohort 3 was recruited 1 year later to assess the sustainability of guideline changes.

Methods. The Royal Children’s Hospital best-practice guidelines for the care of asthma were established after careful review of established national/international guidelines and consideration of evidence-based reviews in the literature. The guidelines also took into consideration recommendations from Improving Child and Adolescent Asthma Management members. There was a detailed launch of the guidelines in the institution, with a major focus on implementation of the guideline recommendations through a variety of vectors. The primary outcome measures of this study were rates of readmission and readmission to the hospital, a change in asthma morbidity, and quality of life.

Results. There were 374 children in cohort 1, 363 in cohort 2, and 377 in cohort 3. There was no difference in baseline characteristics between the cohorts (age, gender, asthma severity). There was no statistically significant difference in the proportion of patients who revisited the emergency department or were admitted to the hospital between the 3 groups within 6 months of the initial presentation (21–27% for revisits to the emergency department and 11% rehospitalization). There also were no differences in measures of morbidity between the cohorts across 3 domains (interval symptoms, exercise compromise, and bronchodilator usage) or in parent or child quality-of-life scores between the groups. However, there was a significant difference in asthma management plans between the 3 groups within 6 months of the initial presentation. Overall, 56% of children were given asthma-management plans with the implementation of the practice guidelines.

Conclusions. The implementation of evidence-based guidelines made no difference in readmission to the hospital, return visits to the emergency department, asthma morbidity, or quality of life but did increase the provision of asthma-management plans. The authors concluded that future efforts to improve asthma management should target specific components of asthma care.

Reviewer’s Comments. Certainly the results of this study are disappointing, especially for those of us who develop, implement, advocate, and teach guidelines. Were the guidelines at fault? Were the guidelines implemented properly? Were they carried through for both sides of the illness, and if so, for how long? It was not clear what went on after the first encounter. Was there appropriate follow-up with guideline-savvy primary caretakers who were able to emphasize the guidelines? My guess is that perhaps more emphasis and more “implementation” is needed more frequently at the patient/caretaker level, and I would not give up on guidelines just yet.

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EMOTIONAL QUALITY-OF-LIFE AND OUTCOMES IN ADOLESCENTS WITH ASTHMA


Purpose of the Study. To examine the association between emotional quality of life (QOL) and asthma morbidity in adolescents with asthma.

Study Population. The study included 185 adolescents (aged 11–17 years) with asthma from 3 different managed care organizations in the United States.

Methods. A voluntary cross-sectional survey was mailed to parents of a sampling of adolescents with asthma. Parents completed questions related to asthma symptoms, health service use, and impact of asthma on physical function. Adolescents completed the Child Health and Illness Profile-Adolescent Edition and the Pediatric Asthma Quality of Life Questionnaire. Outcomes assessed for the prior 12-month period included parent reports of emergency department (ED) visits for asthma, hospitalizations for asthma, doctor visits for worsening asthma, and the number of days of school missed for asthma in the prior 4-week period. The Pediatric Asthma Control Score, composed of items that assess asthma symptoms, impact of asthma on planned activities, and asthma medication use, was also used as an outcome.

Results. In the prior 12 months, 10% of the subjects had been hospitalized, 41% had had ED visits, and 77% had had physician visits for worsening asthma; 30% missed ≥1 day of school in the previous 4 weeks. Regarding emotional QOL, 75% of parents reported having worried about their child’s emotional health in the prior 4 weeks. During the same 4-week period, adolescents commonly reported emotional symptoms: 45% felt depressed, 24% cried a lot, and 48% felt nervous. In bivariate analyses, worse Pediatric Asthma Quality of Life Questionnaire scores were significantly related to worse asthma control, more days of missed school (odd ratio: 7.1; P < .05), and doctor visits for worsening asthma (odds ratio: 7.0; P < .05). Among measures of asthma morbidity, the Pediatric Asthma Control Score showed the strongest and most consistent relationship with measures of emotional QOL: there were significantly fewer asthma-control problems for adolescents with the best levels of emotional function that assess asthma symptom impact.

Conclusions. Poor emotional QOL was common in adolescents with persistent asthma. More frequent school absence, worse asthma control, and more doctor visits for asthma were reported by adolescents with worse asthma-specific emotional QOL. This study does not answer the question of whether emotional QOL is a result or cause of greater asthma morbidity, but it indicates the importance of ascertaining this asthma-specific emotional QOL as a risk factor.

Reviewer’s Comments. Poorly controlled asthma has a tremendous impact on the school-aged child. This study emphasizes the need for clinicians to consider not only outcomes such as ED visits, forced expiratory volume in 1 second, and rescue inhaler use but also emotional QOL. It is likely that lower emotional QOL increases asthma morbidity and that greater asthma morbidity reduces emo-
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*Pediatrics* 2005;116;561
DOI: 10.1542/peds.2005-0698CCC

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