

Pediatric asthma readmission: A marker of disease severity leading to increased parental knowledge

To the Editor:

We read with interest the study by Auger et al¹ characterizing factors associated with pediatric asthma readmission. This study reported that increased parental knowledge of a child's asthma was associated with an increased likelihood of readmission. Although this longitudinal cohort study involved a significant number of patients, we suggest a cautious interpretation of the findings.

In their multivariable analysis of risk factors for asthma readmission, the authors focused on the weakest statistically significant association: a caregiver's increased asthma knowledge was associated with an increased adjusted hazard ratio of readmission. The adjusted hazard ratio was only 1.04 (CI 1.001-1.07). Interestingly, there was no association with tobacco smoke exposure, a well known risk factor.²

Asthma knowledge was assessed using a non-validated questionnaire. In our opinion, the use of a 5-point response scale (rather than a binary true/false response) and questions focusing on physiology rather than clinical management were inappropriate.

The post-hoc analysis of asthma knowledge found that daily non-adherence and previous hospitalization were associated with increased risk of readmission only in the higher vs lower knowledge group. This unusual finding warrants further investigation. Perhaps patients with greater disease severity gain increased knowledge during prior admissions. Alternatively, families with greater knowledge may be more likely to present to the hospital.

Only two variables were used to assess asthma severity: previous inhaled corticosteroids and hospitalizations. A more robust assessment would include a need for intensive care, representations to healthcare providers, and time off from school.³ Using these as outcome measures (rather than just time to hospitalization) would strengthen the study.

We agree that "medication adherence is a potential target...to prevent readmission." However, this needs to be addressed through effective asthma education, promoting practical asthma management skills.⁴ Asthma education should continue to be a mainstay of health promotion in these children.

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