these travelers took vacations for a “median duration of 13 weeks.” Who’s at home doing all the work while these guys are out trekking for months at a time? It would appear that the combination of poorly controlled asthma (ie, frequent bronchodilator use) combined with the heavy exertion during treks was a nasty combination for inducing attacks of asthma. It would also seem that in anticipation of travel involving heavy exertion such as high altitude treks, asthma control really needs to be tightened up or these patients might be (and you knew this was coming) “too loose to trek.”

**Reviewer’s Comments.** What really impressed me is that these travelers took vacations for a “median duration of 13 weeks.” Who’s at home doing all the work while these guys are out trekking for months at a time? It would appear that the combination of poorly controlled asthma (ie, frequent bronchodilator use) combined with the heavy exertion during treks was a nasty combination for inducing attacks of asthma. It would also seem that in anticipation of travel involving heavy exertion such as high altitude treks, asthma control really needs to be tightened up or these patients might be (and you knew this was coming) “too loose to trek.”

---

**THE IMPACT OF FOLLOW-UP PHYSICIAN VISITS ON EMERGENCY READMISSIONS FOR PATIENTS WITH ASTHMA AND CHRONIC OBSTRUCTIVE PULMONARY DISEASE: A POPULATION-BASED STUDY**


**Purpose of the Study.** The purpose of this study was to examine the relation between follow-up office visits after emergency discharge and the risk of emergency readmissions in patients with asthma or chronic obstructive pulmonary disease (COPD).

**Study Population and Methods.** We used population-based data to identify all patients in Alberta, Canada, who had at least 1 emergency visit for asthma or COPD between April 1, 1996, and March 31, 1997 (N = 25,256). A Cox proportional hazards model was used to estimate the adjusted relative risk (RR) of a repeat visit to an emergency department (ED) within 90 days of an initial emergency visit in patients who did or did not have an office follow-up within the first 30 days.

**Results.** There were 7829 patients (31%) who had an office visit during the 30 days after their initial emergency encounter. Follow-up visits were associated with a significant reduction in the 90-day risk of an emergency readmission (RR: 0.79; 95% confidence interval [CI]: 0.73–0.86). Sensitivity analyses showed that a follow-up visit was inversely associated with a repeat emergency visit after adjusting for age, sex, area of residence, and income.

**Conclusions.** Although these data should be interpreted with caution because of missing information on factors such as quality of care, they suggest that follow-up office visits are effective in reducing early relapses in patients who have been recently treated in EDs for asthma or COPD.

**Reviewer’s Comments.** These results come as no surprise to those of us in office practices. I try to have telephone contact within 24 hours and an office visit within 72 hours for asthmatics treated in an ED for an attack of asthma. Unfortunately, in this country too many patients don’t have an office to follow-up with (which is why they used the ED in the first place).

---

**A PROSPECTIVE MULTICENTER STUDY OF FACTORS ASSOCIATED WITH HOSPITAL ADMISSION AMONG ADULTS WITH ACUTE ASTHMA**


**Purpose of the Study.** The authors sought to determine patient characteristics associated with hospital admission after emergency treatment for asthma, and whether disposition guidelines are followed.

**Study Population and Methods.** The authors performed a prospective multicenter cohort study involving 64 emergency departments in the United States and Canada. Consecutive adult patients with asthma exacerbations were interviewed, and their charts were reviewed using standardized protocols. Telephone follow-up at 2 weeks determined relapse.

**Results.** Of 1805 patients, 363 (20%; 95% confidence interval [CI]: 18%–22%) were hospitalized. Among patients with severe exacerbations (final peak flow <50% of predicted), 122 (49%; 95% CI: 43%–55%) were hospitalized. Admission was associated with final peak flow, female sex, non-white race, severity of chronic illness, and severity of exacerbation. Admission predictors were similar regardless of hospital funding, region, or size. Among patients with mild or moderate exacerbations of asthma (peak flow ≥50% predicted), the likelihood of admission was associated significantly with the number of predefined risk factors. Admission was associated with final peak flow (P = .39).

**Conclusions.** Associations between patient characteristics and disposition were similar across sites. Despite guidelines to the contrary, half of patients with final peak flow <50% were discharged. After emergency department treatment and discharge, short-term relapse was uncommon among patients with asthma, suggesting that strict peak flow cutoffs may be unnecessary if risk factors in patients with mild or moderate exacerbations are considered.

**Reviewer’s Comments.** Results of this and other similar studies suggest that rational criteria for hospital admission can be established for patients with attacks of asthma. It’s good to see that emergency departments have developed admission criteria that extend beyond just peak flow measurements.

---

**EPIDEMIOLOGY**

**CHILDHOOD VACCINATIONS AND RISK OF ASThma**


**Purpose of the Study.** A few previous studies have suggested that childhood vaccines may increase the risk of asthma, especially whole cell pertussis vaccine. The aim of this study was to evaluate the suggested association between childhood vaccination and risk of asthma.

**Study Population.** A cohort of 167,240 children enrolled in 4 large health maintenance organizations in the western United States was followed from birth until at least 18 months to a maximum of 6 years.
Results. Childhood asthma prevalence increased from 3.6% to 6.2% (average increase of 4.3% per year) from 1980–1996. A peak prevalence of 7.5% occurred in 1995. The largest increase in prevalence (and associated greater health care use) was in the 0 to 4-year-old age group. Asthma prevalence comparing non-Hispanic blacks and non-Hispanic whites showed a higher prevalence for non-Hispanic blacks by 15% in 1980–1981 and 29% in 1995–1996. Asthma attack prevalence was 5.4% in 1996 and remained plateaued from 1997–2000. Comparison to years before 1997 are precluded by changes in the NHIS design. Asthma office visits grew 3.8% per year from 1989–1999 and hospitalization rates increased 1.4% per year from 1980–1998. Deaths from asthma increased by 3.4% per year from 1980–1998. The greatest mortality occurred in adolescents. Black children were >3 times as likely to be hospitalized and in 1997–1998 were >4 times as likely to die from asthma compared with white children throughout the study.

Conclusions. The increasing burden in childhood asthma may finally be plateauing. The disparities between black children compared with white children remains quite significant for asthma health care utilization and mortality.

Reviewer’s Comments. Could the dramatic and concerning increases in childhood asthma seen over the last 2 decades finally be leveling off? Despite this suggested trend, asthma remains the most common chronic disease of childhood. The 1997 redesign of the NHIS makes following asthma trends somewhat difficult but does emphasize the importance of tracking changes in future years. Perhaps most concerning is the increased increase in hospitalizations and racial disparities. Continuing research efforts are being supported to determine the multifactorial causes of asthma inception in a variety of specific populations including inner-city children and high-risk atopic children.

Mark H. Moss, MD
Madison, WI

ENVIRONMENTAL ALLERGENS

EARLY SENSITIZATION TO HOUSE DUST MITE IS A MAJOR RISK FACTOR FOR SUBSEQUENT DEVELOPMENT OF BRONCHIAL ASTHMA IN JAPANESE INFANTS WITH ATOPIC DERMATITIS: RESULTS OF A 4-YEAR FOLLOW-UP STUDY


Purpose of the Study. To clarify factors involved in the development of bronchial asthma (BA) in children with atopic dermatitis (AD).

Study Population. One hundred sixty-nine infants (age <12 months) with AD who had been seen in the pediatric outpatient clinics of Kyoto, Gunma, and Gifu University Hospitals and affiliated hospitals between August 1994 and July 1995. The infants had neither BA nor episodes of recurrent wheezing at time of registration.

Methods. Patients were followed for 4 years. The outcome of AD, development of BA, and changes in immunologic and other parameters were examined. Total immunoglobulin (IgE) levels and specific IgE against house dust mite (HDM), egg white, cow’s milk, wheat, rice, and soybean were examined using the CAP-RAST (radioallergosorbent test). Family history of AD and BA among relatives was obtained from interviews with the parents. Risk factors for the development of BA were analyzed for each follow-up year.
CHILDHOOD VACCINATIONS AND RISK OF ASTHMA
David Fleischer and Robert A. Wood
Pediatrics 2003;112;478

Updated Information & Services
including high resolution figures, can be found at:
http://pediatrics.aappublications.org/content/112/Supplement_2/478.

Subspecialty Collections
This article, along with others on similar topics, appears in the following collection(s):
Allergy/Immunology
http://classic.pediatrics.aappublications.org/cgi/collection/allergy:immunology_sub

Permissions & Licensing
Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
https://shop.aap.org/licensing-permissions/

Reprints
Information about ordering reprints can be found online:
http://classic.pediatrics.aappublications.org/content/reprints

Pediatrics is the official journal of the American Academy of Pediatrics. A monthly publication, it has been published continuously since 1948. Pediatrics is owned, published, and trademarked by the American Academy of Pediatrics, 141 Northwest Point Boulevard, Elk Grove Village, Illinois, 60007. Copyright © 2003 by the American Academy of Pediatrics. All rights reserved. Print ISSN: 0031-3058. Online ISSN: 1098-4275.
CHILDHOOD VACCINATIONS AND RISK OF ASTHMA
David Fleischer and Robert A. Wood
Pediatrics 2003;112;478

The online version of this article, along with updated information and services, is located on the World Wide Web at:
http://pediatrics.aappublications.org/content/112/Supplement_2/478.3