60.8%, \( P < .0001 \) during the 4-year study period. Adherence reporting was similar between placebo and budesonide treatment groups. Only the “high-adherence” budesonide group was associated with improved outcomes (change in forced expiratory volume in 1 second before and after bronchodilator use), a finding that may have impacted the overall CAMP study findings.

CONCLUSIONS. Self-reported adherence data overestimated objectively measured adherence by 30%, making self-reported medication use misleading during clinical trials.

REVIEWER COMMENTS. This study adds to the evidence base that self-reporting of adherence is erroneous and may result in misleading outcome reporting in clinical trials. This study also provides information that can be useful to the practicing clinician regarding the use of objective, rather than self-reported, adherence during clinical decision-making when possible.


Jennifer Petitto, MD
Stacie M. Jones, MD
Little Rock, AR

Antibiotic Prescribing During Pediatric Ambulatory Care Visits for Asthma


PURPOSE OF THE STUDY. To determine how frequently antibiotics are prescribed during pediatric asthma visits without documented coexisting diagnoses that justify their use.

STUDY POPULATION. Pediatric patients <18 years of age seen in outpatient offices and emergency departments in the United States for asthma between 1998 and 2007.

METHODS. Data from the National Ambulatory Medical Care Surveys and the National Hospital Ambulatory Medical Care Survey were examined for patients seen for asthma in clinics and emergency departments. Each visit was assessed with regard to reason for visit and diagnoses (by using International Classification of Diseases, Ninth Revision, Clinical Modification codes), medications prescribed, physician specialty, participation of allied health professionals, patient demographics, and performance of asthma education (after 2001). Multivariable logistic regression models then were used to assess associations with the prescription of antibiotics.

RESULTS. Antibiotics were prescribed during 15.6% of 5198 ambulatory care visits for asthma without a coexisting diagnosis to justify treatment. This finding equates to \(~1\) million pediatric ambulatory patient visits per year in the United States, in which patients with asthma are treated with antibiotics without documentation of a reason for doing so. Macrolides were prescribed nearly 50% of the time, followed by aminopenicillins (26.3%) and cephalosporins (20.6%). Multivariate analysis revealed that antibiotics were prescribed more in the winter (odds ratio [OR]: 1.92; 95% confidence interval [CI]: 1.05–3.52), and when systemic steroids were also prescribed, the OR = 2.69 (95% CI: 1.68–4.3). Treatment in an emergency department was associated with decreased likelihood of antibiotic prescribing (OR: 0.48; 95% CI: 0.26–0.89), whereas in the office-based setting, asthma education during the visit was associated with reduced antibiotic prescribing (OR: 0.46; 95% CI: 0.24–0.86).

CONCLUSIONS. Approximately 1 of every 6 pediatric patients evaluated for asthma in an ambulatory care setting is prescribed antibiotics without a documented indication, which indicates a need for either better documentation or more education and interventions to prevent the unnecessary use of antibiotics for asthma exacerbations.

REVIEWER COMMENTS. Although guidelines for asthma management do not support routine antibiotic therapy for asthma exacerbations, this study showed that it is a fairly common practice in ambulatory care settings. Educational programs to increase awareness of inappropriate antibiotic prescriptions should be developed. Previous publications have shown that multifaceted interventions, such as physician education, patient education, community-wide programs, and provider feedback are more likely to be successful than single interventions alone.


Erin M. Cannington, MD
William K. Dolen, MD
Augusta, GA

Increased Risk of Pertussis in Patients With Asthma


PURPOSE OF THE STUDY. Pertussis infection remains a major public health problem with reported cases increasing more than 27-fold since 1976. The prevalence of asthma has also increased, with up to 17% of children affected. The purpose of this retrospective study was to determine if patients with asthma were at increased risk of pertussis.

STUDY POPULATION. This population-based, case-controlled study compared asthma history in adults and children with documented pertussis (positive polymerase chain reaction [PCR]) to that of matched controls suspected of having pertussis but with negative PCRs.

METHODS. Pertussis PCRs during a 2-year outbreak in Olmstead County, MN, were used to identify 223 pertussis-positive cases; 164 patients were eligible for inclusion. From a pool of 5537 pertussis-negative patients, 328 age- and sex-matched controls were identified. A previously validated formula was used to estimate the population attributable risk percentage of asthma for pertussis infections.
Antibiotic Prescribing During Pediatric Ambulatory Care Visits for Asthma
Erin M. Cannington and William K. Dolen
Pediatrics 2012;130;S38
DOI: 10.1542/peds.2012-2183KKK

Updated Information & Services including high resolution figures, can be found at:
/content/130/Supplement_1/S38.1.full.html

Permissions & Licensing Information about reproducing this article in parts (figures, tables) or in its entirety can be found online at:
/site/misc/Permissions.xhtml

Reprints Information about ordering reprints can be found online:
/site/misc/reprints.xhtml
Antibiotic Prescribing During Pediatric Ambulatory Care Visits for Asthma
Erin M. Cannington and William K. Dolen

Pediatrics 2012;130;S38
DOI: 10.1542/peds.2012-2183K KK

The online version of this article, along with updated information and services, is located on the World Wide Web at:
/content/130/Supplement_1/S38.1.full.html