METHODS. To assess parents’ positive and negative attitudes about their child’s medications, a previously validated 10-item Beliefs About Medications Questionnaire was used. A necessity-concern differential score was calculated and separated the study population into 3 groups: greater concern than necessity; equal to concern; and greater necessity than concern. To measure medication adherence, a 4-item parent-report scale Medication Adherence Score was used.

RESULTS. Only 14% of the parents reported full compliance with their child’s medications. Among 77% of the parents, necessity scores outweighed concern scores. For 17%, concerns outweighed necessity, and 6% had equal scores. Nonminority parents were more likely to have necessity scores that exceeded concern scores (79% vs 68%; P = .03). Other factors associated with parents having a higher concern than need score were parents who used alternative therapies (P = .03), parents whose children were taking <2 preventive medications (P = .01), and parents who rated their child’s last exacerbation as moderate to severe. Mean adherence scores increased as the necessity-concern differential score increased.

CONCLUSIONS. When parents’ positive and negative beliefs about medications are weighed against each other, most felt greater need for their child’s medications than concern, and this was independently associated with better adherence scores. Nonminority status was independently linked with better medication adherence scores.

REVIEWER COMMENTS. The question that was not answered with this study is whether physician-directed patient education regarding asthma and asthma medications affects parents’ beliefs and subsequent adherence to their child’s asthma medications. It would be interesting to explore the basis for parental concern, addressing the concerns and reinforcing the perception of need through education, and then measure the impact of the intervention on change in adherence.

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Depression Symptoms and Substance Abuse in Adolescents With Asthma


PURPOSE OF THE STUDY. To determine the frequency of substance abuse and examine rates of depression in youth with asthma.

STUDY POPULATION. The 2005 Youth Risk Behavior Survey (YRBS) was administered to 13,917 students in grades 9 through 12. Students from 159 high schools in 21 cities and 40 states produced a nationally representative distribution according to grade, gender, and race/ethnicity.

METHODS. The YRBS includes 2 questions about asthma. Only students with a physician diagnosis of asthma and symptoms within the previous year were considered to have asthma. The YRBS inquires about many health risk behaviors, and this study focused on substance-abuse queries including the use of cigarettes, smokeless tobacco, marijuana, cocaine, and ≥5 drinks within a couple of hours during the previous 30 days. The YRBS includes 5 questions that follow a progression of seriousness from sadness to suicide-attempt–induced injury. The report of suicidal thoughts was chosen as an indication of probable depression.

RESULTS. Of 13,917 questionnaires completed for the items studied, 2427 (17.4%) respondents had been diagnosed with asthma. A total of 720 students (5.2%) indicated asthma symptoms within the previous year, comprising the asthma group. All others were placed in the no-asthma group. All 5 risk behaviors occurred at least as often in students with asthma as not. Cocaine use (5.8% vs 3.7%; P = .004) and cigarette smoking (23.3% vs 20.5%; P = .02) occurred significantly more frequently in asthmatic respondents. Long-term smokers with asthma smoked more cigarettes than their nonasthmatic counterparts. Marijuana use and binge drinking exceeded 20% in both groups. Depressive feelings (45.3%) and suicidal thoughts (31.0%), plans (24.2%), actions (17.9%), and injuries (6.7%) occurred significantly more often in the asthma group (P < .001 for all). As expected, the frequency of each reported event decreased as the severity indication increased. In the youth with asthma, use of all 5 health-endangering substances was higher in those with depression (P = .004 for alcohol use, P < .001 for all others).

CONCLUSIONS. High school students with asthma reported much higher rates of depressive ideation and used health-endangering substances at a rate equal to or greater than their nonasthmatic peers. These risk behaviors signal a heightened need for intervention.

REVIEWER COMMENTS. The rates of substance abuse and depression in the cohort as a whole are staggering. That high school students with asthma are an especially at-risk group indicates our need for vigilance in identifying depressed or substance-abusing teens with asthma. In addition to some of the risk behaviors (eg, cigarette smoking) that lead to poorer asthma control, the behaviors themselves have a great impact on the students’ overall health and well-being. It is well known that depression and other psychological disorders are risks for fatal asthma, which provides another incentive for us to
monitor and respond to risk-taking behaviors in this age group.

Transition to Adulthood: Delays and Unmet Needs Among Adolescents and Young Adults With Asthma

PURPOSE OF THE STUDY. To examine the effect of the transition to adulthood on financial and nonfinancial barriers to care in youths with asthma.

STUDY POPULATION. Studied were adolescents and young adults with asthma. Public-use data from the National Health Interview Survey conducted by the National Center for Health Statistics were analyzed. Data from the years 2000–2005 were pooled to provide a sample of 26 597 adolescents (12–17 years) and 19 998 young adults (18–24 years).

METHODS. Subjects were classified as having delayed care because of financial barriers when during the previous 12 months they had delayed seeking medical care because of concerns about affordability. Similarly, an unmet need because of a financial barrier was identified when during the previous 12 months the respondents indicated that they had failed to receive needed medical care or prescription medication because they could not afford it.

RESULTS. More young adults than adolescents encountered financial barriers that resulted in delays (18.6% vs 8%; P < .05) and unmet needs (26.6% vs 11.4%; P < .05). Delays caused by nonfinancial barriers were similar (17.3% vs 14.9%; P was not significant).

CONCLUSIONS. Delays and unmet needs caused by financial reasons were significantly higher for young adults with asthma compared with adolescents with asthma.

REVIEWER COMMENTS. It is crucial for everyone who treats children with asthma to recognize the potential vulnerability of these patients as they transition to adulthood. Appropriate counseling and written materials regarding health insurance might be helpful, as might providing lists of resources for free or reduced-cost care that are available in the local community.

MEDICAL THERAPIES

A Multicenter, Randomized, Controlled Trial of Dexamethasone for Bronchiolitis

PURPOSE OF THE STUDY. To evaluate the efficacy of a single dose of oral dexamethasone (1 mg/kg) compared with placebo in the treatment of acute bronchiolitis.

STUDY POPULATION. A total of 600 children (aged 2–12 months) with a first episode of wheezing diagnosed in the emergency department as moderate-to-severe bronchiolitis were included.

METHODS. Patients were enrolled at 20 emergency departments during the months of November through April over a 3-year period. The primary outcome was respiratory assessment and score change during the first 4 hours. Later outcomes evaluated included length of hospital stay, medical visits, and adverse events.

RESULTS. Baseline characteristics were similar for both groups. The admission rate was 39.7% for children assigned to dexamethasone compared with 41% for those assigned to placebo. Both groups had improvement during the observation period with similar mean changes in respiratory assessment score. For the patients admitted to the hospital, there was no difference in mean hospital stay (2.55 vs 2.27 days), subsequent hospital admissions, or adverse events.

CONCLUSIONS. Single-dose dexamethasone did not prevent hospital admission for bronchiolitis.

REVIEWER COMMENTS. This study finally allows for a definitive statement that no significant benefit can be seen with the use of corticosteroid for first episodes of wheezing. It should be noted that bronchodilator treatment was not regulated but seemed not to affect outcomes because treatment was equally distributed between the groups. This continues to strengthen the notion that supportive therapy with good hydration and preventing hypoxia are the most important interventions for a first episode of bronchiolitis.

Anti-inflammatory Effects of High-Dose Inhaled Fluticasone Versus Oral Prednisone in Asthma Exacerbations

PURPOSE OF THE STUDY. There have been reports that parental corticosteroids have no bronchodilator effect within
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