LEV patients previously received more CM (41% no CM; 24% 1 CM; 34% >1 CM), after treatment the percent with >1 CM declined to 28%. Their leukotriene modifier use increased from 22% to 25% while long-acting bronchodilator use decreased from 13% to 10%. In patients without prior CM, mean charges declined by similar amounts in both groups (LEV: $360, RAC: $306) following treatment. In patients with 1 CM, LEV was associated with a $116 reduction despite a $121 increase in pharmacy charges while RAC was associated with a $22 decrease. In patients with >1 CM, LEV was associated with a $435 reduction in mean charges while RAC was associated with a $311 increase. CONCLUSIONS: Asthmatic patients treated with LEV required no additional CM and some patients reduced the number of CM. Cost reductions associated with LEV increased with severity.

**Impact of Levalbuterol Versus Racemic Albuterol on Outpatient Asthma Care Charges**

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Preliminary evidence suggests that levalbuterol (LEV), the therapeutically active isomer of albuterol, can improve clinical outcomes while reducing health care costs compared to racemic albuterol (RAC). OBJECTIVE: Explore the impact of LEV versus RAC on resource utilization, co-medication use, and cost of therapy in asthmatics. METHODS: Claims data on patients prescribed LEV and RAC were obtained from the PharMetrics Integrated Outcomes Database. Age- and sex-matched samples of patients initiating therapy with LEV or RAC (no prescriptions for either agent in prior 6 months) were selected and their asthma-related charges were assessed over 6 months following the initial prescription. RESULTS: 544 LEV-treated patients were identified and matched to 544 RAC-treated patients. 70% of all patients were <12 years of age. 32% of RAC patients and 59% of LEV patients received asthma controller medication during the prior 6 months. Mean asthma-related (pharmacy and medical) charges during the prior 6 months were $872 versus $587 in the LEV and RAC groups respectively. During the 6 months follow-up period, controller medication use increased among RAC patients to 59%, while use among LEV patients remained unchanged. Overall mean charges decreased by $298 for LEV and $61 for RAC. In patients receiving concomitant controller medications, LEV was associated with a $247 decline in charges versus a $116 increase for RAC. Among patients treated in primary care (pediatricians, family practitioners, and internists), the reduction in mean charges was $262 for LEV, while RAC was associated with a $180 increase. CONCLUSIONS: 1) LEV was prescribed to patients who were “sicker” than those prescribed RAC; 2) Patients treated with RAC, but not LEV, tended to require additional controller medications; 3) LEV was associated with greater reduction in total cost compared to RAC, which in “sicker” and primary care patients was associated with increased cost.

**Determinants of Inappropriate Antibiotic Prescribing**

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BACKGROUND: Previous studies have shown that antibiotics are prescribed for nasopharyngitis, upper respiratory infection, and acute bronchitis approximately 40–80% of the time. Because these conditions tend to be viral in nature, the efficacy of treating with antibiotics is questionable at best and potentially dangerous at worst. OBJECTIVE: The purpose of this study is to determine those physician characteristics that are associated with inappropriate antibiotic prescribing. METHOD: This study reviewed the antibiotic prescribing patterns of 138 physicians treating members of the NJ Carpenters Funds from 1997–1998 for upper respiratory infection and acute bronchitis. Using logistic regression analysis, the rate of antibiotic prescribing was used to evaluate the potential relationship with the following physician characteristics: specialty, year of graduation from medical school, gender, ABMS (American Board of Medical Specialties Status), type of practice (group versus solo), and foreign versus domestic medical graduate status. RESULTS: The results indicate that there were significantly disparate rates of prescribing by physician specialty, as compared to pediatricians: family practitioners (OR 3.296 95% CI 2.439–4.419), internal medicine (OR 1.67 95% CI 1.145–2.436) and other (primarily general practice) (OR 1.421 95% CI 1.008–2.003). In the pediatric subgroup, there was a definite trend in inappropriate antibiotic prescribing according to the year of graduation from medical school (1950s: OR 3.779 95% CI 1.774–8.051; 1960s: OR 3.088 95% CI 1.994–4.783, and 1970s: OR 1.713 95% CI 1.123–2.614). CONCLUSION: Although some of these findings are significant, the majority of physician characteristics reviewed were not significantly related to inappropriate antibiotic prescribing. The findings may be indicative of the fact that this problem is widespread and multi-faceted. This study suggests that there is a definite need for education of both patients and physicians to change long held beliefs that antibiotics are a cure-all for all types of infections, and that there are no negative consequences to inappropriate antibiotic use.