vestigation was performed to determine whether the introduction of salmeterol to moderate-to-severe asthmatics in a Medicaid fee-for-service population reduces the overall asthma related health care expenditures. METHODS: The New Mexico Medicaid fee-for-service claims database was searched between 1/1/94 and 12/31/98 to identify both a salmeterol and control group. The inclusion criteria for the salmeterol group were: patients receiving salmeterol, who were 66% compliant with salmeterol therapy, had a diagnosis of asthma (ICD-9: 493.0, 493.1, 493.9), were 13 years of age or older, did not have a diagnosis of COPD (ICD-9: 496.x) and must have been Medicaid eligible for 2 consecutive years. In addition to the above criteria for the salmeterol group, to be included in the control group, patients must not have received salmeterol between 4/12/95 and 4/12/97 (around the median start date of salmeterol, 4/12/96), and in order to match for severity must have received other asthma maintenance medications. Patients meeting these criteria for the salmeterol and control groups were 57 and 58, respectively. ANCOVA were performed to compare costs between the two groups controlling for baseline costs. Average per patient benefit-cost ratios were calculated by dividing total cost savings by increase in medication costs for both groups. RESULTS: No significant difference existed among average per patient total health care expenditures between the salmeterol and control groups ($2266 and $1955, respectively). Interestingly, in the salmeterol group, total medication costs increased significantly (t = −7.895, p = 0.000) while total health care costs decreased, although not significantly. The average per patient benefit-cost ratio for the salmeterol group was 0.061 ($41/$668). CONCLUSION: Introduction of salmeterol in the New Mexico Medicaid fee-for-service population did not significantly reduce total asthma related health care costs.

PAR20

EFFECTIVENESS OF COMPLIANCE ON HEALTH CARE RESOURCE USE IN ASTHMA PATIENTS TREATED WITH MONTELUKAST VS. INHALED CORTICOSTEROIDS

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OBJECTIVES: To compare effectiveness of compliance on health care utilization between montelukast and standard therapy (inhaled corticosteroid—ICS) patients. Indicators for health care resource use include drug use, ER visits, and total charges. METHODS: Retrospective cohort analysis using LifeLink employer claims database of 1.6 million Americans. ANOVA models examined health care resource use of montelukast and ICS patients in six months prior (pre-period) and six month following (post-period) new treatment of interest adjusting for age, gender, region, plan type, and prescriber specialty. RESULTS: The study cohort consisted of 3,775 montelukast patients and 7,331 ICS patients. Average compliance, defined as medication possession ratio, of montelukast patients (63%) was significantly greater (p = 0.001) than that of ICS patients (31%). Montelukast patients were more likely to receive short-acting beta-agonist therapy in pre-period than ICS patients (p = 0.001), which suggests more severe patients in montelukast group, but there was no significant difference between two groups in post-period (p = 0.854). Among patients with concomitant methylxanthine therapy, montelukast patients had more days of methylxanthine therapy than ICS in pre-period (p < 0.001), but there was no significant difference in post-period (p = 0.130). For patients with at least one asthma-related ER visit, montelukast patients had more ER visits per patient than ICS patients in pre-period (p = 0.010), but no significant difference was noted in post-period (p = 0.325). Average total charges for montelukast were higher than for ICS patients in both pre-period (p < 0.001) and post-period (p < 0.001). CONCLUSIONS: Compliance with montelukast treatment was markedly better than with ICS therapy. Initially, montelukast patients were higher resource users than ICS patients. During six months treatment with montelukast, some health care resources used decreased to the level of ICS patients. Results suggest that markedly improved compliance of montelukast decreased asthma-related health care utilization, however total charges for montelukast patients remained higher than for ICS patients.

PAR21

LEVALBUTEROL USE IS ASSOCIATED WITH DECREASED HEALTH CARE COSTS IN PATIENTS WITH MORE SEVERE ASTHMA

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Preliminary pharmacoeconomic analyses suggest that levalbuterol (LEV) therapy is associated with decreased outpatient asthma health care costs. OBJECTIVE: Examine treatment costs in asthma patients stratified by the number of prescribed controller medications (CM), an index of asthma severity. 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. 62% of RAC patients previously received no CM, 20% had 1 CM, and 18% had >1 CM. Following RAC treatment 30% had 1 CM and 29% had >1 CM. Use of leukotriene modifiers increased from 8% to 14% and corticosteroid use increased from 33% to 46%. Although