THE EFFECT OF A LETTER-BASED EDUCATIONAL PROGRAM FOR PRESCRIBERS AND PHARMACISTS ON ADHERENCE TO NATIONAL ASTHMA GUIDELINES AND HEALTHCARE UTILIZATION

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OBJECTIVE: To assess the effect of a letter-based intervention program, targeted at prescribers and pharmacists, on adherence to national guidelines and healthcare utilization in the Connecticut asthma Medicaid population.

METHODS: A retrospective DUR was conducted from April to June 2001. Patients with asthma in the Connecticut Medicaid Program submitting >1 claim per month (over a 6-month period) for short-acting β₂-agonists were identified (intervention group; n = 135). Patient specific intervention packets explaining the problem, the patient’s medication profile, an asthma education leaflet, response form and return envelope were mailed to the patients’ prescribers and pharmacists. A control group of asthma patients, who were not HDB users at baseline and drawn from the same Medicaid program, were also identified (n = 510). Utilization of long-term asthma control agents and spacers and healthcare utilization were compared between the intervention and control patients 6 months after the mailing.

RESULTS: At baseline, the intervention group had lower utilization of long-term control agents compared to the control group (58% vs. 96%, respectively; p < 0.001) but there was no difference after the intervention program (65% vs. 71%, p = 0.169). A greater number of claims were submitted for spacers in the intervention group compared to control after the mailing (7% vs. 2%, p = 0.007). Before the mailing, the intervention group incurred more prescriber office visits than the control group (mean ± SD; 0.46 ± 0.82 vs. 0.25 ± 0.66, p < 0.001) but this difference was not evident after the intervention program (0.24 ± 0.63 vs. 0.18 ± 0.60, p = 0.283). CONCLUSION: This intervention program had a modest effect on improving the use of long-term control agents and reducing prescriber office visits.

COMPLIANCE WITH ASTHMA CONTROLLER MEDICATIONS: AN ANALYSIS OF GAPS IN CARE AND OPPORTUNITIES FOR COST REDUCTION

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OBJECTIVES: National treatment guidelines recommend daily use of controller medications for people with persistent asthma. Consistent use of controllers can help reduce medical resource utilization, but compliance with therapy is often poor. Our objective is to quantify the compliance gap and the opportunity cost of current asthma treatment in a large benefit plan population.

METHODS: Asthma patients were participants in medical and drug benefit plans sponsored by a large national employer. All were under age 65 and had continuous benefit eligibility during the study period, June 1997 through May 1999. They were identified based on medical claims for asthma-related services. During a 12-month analysis period, medical claims and prescription drug claims were used to track utilization. Medication compliance was defined by the percentage of days during the analysis period that a patient had days-supply of a prescribed drug class; less than 80% was considered noncompliant. Cost and utilization were modeled using regression analysis, adjusting for age, sex, comorbidity, disease severity, and plan type. RESULTS: Only 9.9% of asthma patients were compliant with their prescribed controller medications. Low compliance was common; 41.2% of patients had less than a 20% days-supply of controller medications during the analysis period. For quick-relief medications, the patient distribution was skewed toward high utilization. High levels of compliance with controller medications were found to decrease hospitalization risk by 36% (comparing the highest levels of compliance). High compliance with controllers also reduced asthma-related medical costs, more than offsetting the increase in drug costs. The return-on-investment (ROI) for this guidelines-based increase in drug utilization was 2:1. CONCLUSIONS: Therapy for many asthma patients is suboptimal, including under use of controller medications and overuse of quick-relief medications. Shifting patient utilization toward daily controller use can reduce hospitalization risk and decrease overall healthcare costs.

COMPARISON OF RISK FOR HOSPITAL AND/OR EMERGENCY DEPARTMENT VISITS FOR MEDICAID PATIENTS WITH COPD

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OBJECTIVES: To compare the risk of hospital and/or Emergency Department (ED) visits [events], based on various treatment regimens in a population of Medicaid patients with Chronic Obstructive Pulmonary Disease (COPD). METHODS: Retrospective observational cohort design. Texas Medicaid patients aged 40 to 65 years enrolled from 1998 to 2001 with a primary diagnosis of COPD were identified. Five index therapy cohorts were assessed: 1) ipratropium / Combivent (IPR); 2) salmeterol (SAL); 3) inhaled corticosteroid (ICS); 4) ICS + IPR; and 5) ICS + SAL. Subjects were followed until they had a COPD-related event, or for 12-months, whichever came first. Cox proportional hazard analysis compared therapy cohorts, assessing time to first COPD-related event.
related event, adjusting for gender, age, ethnicity, presence of co-morbid respiratory diseases, number of other co-morbidities, pre-index use of short-acting beta agonists (SABAs), oral steroids and theophylline, and pre-index events. RESULTS: A total of 4447 patients were identified, 2435 (55%) on IPR, 1088 (24%) on ICS alone, 410 (9%) on ICS + IPR, 299 (7%) on SAL alone and 215 (5%) on ICS + SAL. Compared to IPR alone, the use of ICS alone (HR 0.82, 95% CI: 0.69, 0.96), SAL alone (HR 0.62, 95% CI: 0.46, 0.84), and ICS + SAL (HR 0.64, 95% CI: 0.45, 0.91) were associated with a lower event risk when controlling for the other factors. Factors that were significant predictors of an increase risk of an event were: being white, having a co-morbid respiratory disease, using pre-index SABAs, and having pre-index events. CONCLUSION: The results of this analysis suggest that the use of inhaled corticosteroids and salmeterol were associated with a significant decrease in the risk of COPD-related hospital/ED events compared to the use of IPR alone in a population of Medicaid patients. This was an observational retrospective analysis and these data should be confirmed by prospective studies.

Abstracts

PRP7

USE OF LONG-TERM ASTHMA CONTROLLER MEDICATIONS BEFORE AND AFTER A HOSPITALIZATION OR EMERGENCY DEPARTMENT VISIT

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OBJECTIVES: The purpose of this abstract is to examine the use of long-term asthma controller medications (LTACM) before and after asthma-related inpatient stays and emergency department events (EDE). METHODS: Data was drawn from the 1997 Medstat-Marketscan claims database. Asthma-related events were defined as EDE or inpatient hospital stay with a primary or secondary diagnosis of asthma (ICD-9 code 493). LTACM included corticosteroids, xanthines, leukotriene modifiers and combination medications. RESULTS: The sample included 464 individuals with an asthma-related EDE and 747 with an inpatient hospital stay. Of the EDE sample, 60% filled a prescription for LTACM during the calendar year. A total of 32% had filled a prescription prior to the EDE with an average of 85 days between the prescription being filled and the EDE. Twenty percent filled a prescription during the month subsequent to the EDE and 35% during the subsequent calendar year. Of those with a hospital stay, 60% filled a prescription for LTACM during the calendar year. Of those that filled a prescription prior to the hospitalization, there was an average of 70.4 days between the filling of the prescription and the event. Forty four percent of the hospital sample filled a prescription afterward, with 65% doing so within 30 days. CONCLUSIONS: We find that many of those receiving care in inpatient ad emergency departments are not using long-term controller medications. It is likely that virtually all of these individuals have been prescribed medications, but have not complied with the drug regimen. Even after an adverse event, a slight majority continues to not fill prescriptions. One approach for improving the health of those with asthma and reducing asthma expenditures.

RESPIRATORY DISEASES/DISORDERS—Economic Outcomes

PRP8

COMPARISON OF THE ECONOMIC IMPACT OF MONTELUKAST AND INHALED CORTICOSTEROID AGENTS ON ALLERGIC RHINITIS-RELATED UTILIZATION IN PATIENTS WITH ASTHMA

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OBJECTIVES: Montelukast has been approved for the treatment of seasonal allergic rhinitis. The study’s objective was to compare allergic rhinitis (AR) associated medical and pharmacy utilization in asthma patients with comorbid AR initiating inhaled corticosteroids (ICS) or montelukast (MO). METHODS: A retrospective, observational study using healthcare claims from 25 United Healthcare plans was conducted. Subjects less than 65 years old and newly started on either ICS or MO between 01.01.1999 and 12.31.2000 were identified. Subjects with at least one asthma (493.xx) and one AR (477.xx) medical claim, 24 months of continuous enrollment, and either an AR claim or a non-sedating antihistamine (NSA) during the 12-month baseline were included. A logistic propensity score model was constructed utilizing AR, asthma and total health services utilization in the baseline period and matched cohorts selected based on a propensity score difference of £0.01. During the 12-month follow-up, the total number of NSA and nasal corticosteroid (NCS) refills, total days supply of NSA received, total AR pharmacy cost (not including asthma medications) and total AR health services cost (pharmacy + medical) were determined. Wilcoxon rank sum was used to test median differences in AR utilization. RESULTS: A total of 1706 subjects were matched, (853 ICS and 853 MO). Compared to ICS subjects, MO subjects received significantly more refills for NSA (median of 2.55 vs. 3.34, p < 0.0001), significantly more days of NSA therapy (median days supply of 30 vs. 60, p = 0.0001), and fewer NCS refills (median of 0.63 vs. 0.54, p = 0.0459). Additionally, MO subjects had significantly higher AR pharmacy cost ($130 vs. $107, p = 0.0028) and total AR cost ($279 vs. $214, p = 0.0180). CONCLUSIONS: In this population, compared with ICS, the use of MO in asthma subjects with comorbid AR was associated with greater AR health services cost in the 12-month follow-up period.