RESOURCE UTILIZATION (HOSPITAL AND PHYSICIAN COST/VISITS) AFTER INTRODUCTION OF THE NEW TREATMENT GUIDELINES IN ASTHMA (1997)
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OBJECTIVE: To evaluate the resource utilization after introduction of new treatment guidelines in Asthma (1997). METHODS: Paid claims for inpatient, outpatient and pharmacy services during the period 1994 through 2000 were collected. New treatment guidelines solicited use of anti-inflammatory medications for patients using more than 1 canister of beta-inhaler/month. Chronic users (CUs): using more than 10 canisters of beta-inhaler/year. Patients were further categorized: CHBYAi (CUs, using some anti-inflammatory medication; “appropriate therapy”) and CHBNAi (CUs not using any anti-inflammatory medication). Univariate analyses for continuous variables was performed using Wilcoxon-Rank Sum test and multivariate logistic regression was performed to predict the probability of being on appropriate therapy. RESULTS: A total of 1293 patients were using more than 10 canisters of beta-inhalers, of which 923 (71%) were on appropriate therapy. The CHBNAi, for year 1998, had significantly fewer asthma-related physician visits (52.6 Vs 81.0) and costs (59.9 Vs 111.8); asthma-related hospital visits (78.0 Vs 90.0) and costs (90.5 Vs 112.3) compared to CHBYAi (p < 0.001); statistically significant and consistent across the years. Adjusted r-square for multivariate logistic regression across the years: 15.1% to 28.9%. Total asthma-related physician visits and age (1998) were significantly associated with the odds of being on appropriate therapy across all the years. For example, in 1998, each patient, with asthma-related physician visit was twice as likely (90% CI: 1.410–2.843), and each unit increase in age was 0.981 times likely (90% CI: 0.965–0.998); to be on appropriate therapy. CONCLUSION: Per the guidelines, we would have expected a higher health care utilization (visits & cost) for the CHBNAi group but we could not conclude this and it could be related to factors such as severity of illness.

THE AVERAGE COSTS OF THE TREATMENT OF ASTHMA EXACERBATIONS IN IN-PATIENT CARE AND HOSPITAL EMERGENCY ROOM IN POLAND
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OBJECTIVES: The objective of this analysis was to investigate direct cost of asthma exacerbations in Poland from the perspective of the payer and the service provider. METHODS: To examine the current practice of asthma exacerbations treatment a survey in 4 hospitals was performed. The hospitals were chosen on the basis of different fixed cost class. In those hospitals data concerning the cost of asthma exacerbations treatment were collected. According to current practice severe asthma exacerbations were treated in-patiently and mild or moderate asthma exacerbations were treated in hospital emergency rooms (usual stay for one day). The following costs were calculated for inpatient care (severe exacerbations): hospital stay, pharmaceuticals, personnel, and diagnostic procedures. An assumption that average hospital admission took 10 days was made. On the basis of collected data the pharmacueticals utilization per 10-day hospital stay was assessed. For the purpose of this assessment the decision tree was formulated: the proportions expressing probabilities of patients receiving specific drug therapy, duration of drug therapy and route of the drug administration were calculated. For asthma exacerbations treated in hospital emergency room similar cost groups were included. Sensitivity analysis was performed. RESULTS: The average costs per patient care were estimated: hospital stay 200 PLN (€50) 1 day; drug utilization 435.3 PLN (€110); 10 day personnel 66.39 PLN (€17); 1 day diagnostic procedures 91.4 PLN (€23) per hospital admission. The average cost of inpatient treated (10 days) asthma exacerbation was estimated at 3190.61 (€798) per one patient. The average cost of asthma hospital emergency room care was estimated at 172.60 PLN (€40) per patient/day. CONCLUSION: This cost analysis of asthma exacerbations treatment is one of the first performed in Poland. Further analysis should include more centers to allow confidence interval estimation.

PHARMACOECONOMIC COMPARISON BETWEEN TWO DRUG STRATEGIES OF TREATMENT OF RECURRENT ACUTE RHINOPHARYNGITIS IN 18-MONTH-OLD TO 4-YEAR-OLD CHILDREN: HOMEOPATHY AND ANTIBIOTICS
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OBJECTIVES: To compare “homeopathic drugs” strategy (H) with “antibiotic drugs” strategy (A) for treating recurrent acute rhinopharyngitis in France, in terms of effectiveness, quality of life, and costs. METHODS: Effectiveness, quality of life, and costs were derived from a 6-month pragmatic prospective study including 499 “children aged between 18 months and 4 years, who experienced at least 5 bouts of rhinopharyngitis in 1999, and who consulted a homeopathic or non-homeopathic GP for the first time in 2000 either for preventive treatment or for a current bout”. Strategy H included 241 chil-
dren that received at least 1 homeopathic drug and no antibiotics, and strategy A 190 children that received at least 1 antibiotic and no homeopathic drugs. In both strategies, other drugs could have been prescribed. Medical effectiveness was assessed by measuring the number of bouts of acute rhinopharyngitis, the number of complications, and the quality of family life using the Par-Ent-Qol© scale. Direct medical costs (medical visits, medication, additional costs) and indirect costs (sick-leaves) were assessed from the national health insurance system viewpoint, using public prices and French Social Security tariffs. We checked the comparability of patient population and performed appropriate statistical tests: Chi-Square test for qualitative variables, and Student, Mann-Whitney, Kolmogorov-Smirnov tests for quantitative variables. RESULTS: The “homeopathic drugs” strategy produced significantly better results in terms of medical effectiveness (number of bouts: 2.71 vs 3.97, number of complications: 1.25 vs 1.95) and quality of life (global score: 21.38 vs 30.43), for significantly lower direct medical costs reimbursed by the national health insurance system (88€ vs 99€) and fewer number of sick-leaves (23 vs 60). CONCLUSION: Homeopathic drugs could constitute a cost-effective alternative to antibiotics for treating rhinopharyngitis, and so could provide an answer to public health and economic problems posed by the inappropriate use of these drugs in this disease in France.

ASTHMA HEALTH CARE EXPENDITURE: THE ROLE OF CAPITATION AND MANAGED CARE
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OBJECTIVES: The objective of this study was to investigate the effect of capitation on the inpatient and outpatient expenditures by private health plans for asthma treatment. METHODS: Data were drawn from the MEDSTAT Group’s MarketScan database, which has health care claims data from large employment-based health insurers. The sample includes 106,943 patients enrolled in 1999 in one of 5 different types of health plans: a Health Maintenance Organization (HMO), a capitiated Point-of-Service plan (CPOS), a non-capitated Point-of-Service plan (NCPOS), a Preferred Provider Organization (PPO), and a traditional comprehensive indemnity plan (COMP). The first two plans are capitated, and the last three are non-capitated, or fee-for-service plans. We compared the mean payment between capitated and non-capitated systems for outpatient and inpatient care by using t-test for a mean. RESULTS: Capitated plans had significantly smaller payments per visit for outpatient patients ($56 for CPOS and $59 for HMO) relative to non-capitated COMP ($67), PPO ($71) and NCPOS ($72) plans (p-value < 0.01). Similarly, mean payment for each hospitalization under HMO ($3748) and CPOS ($3783) plans was also significantly lower than under NCPOS ($4139), COMP ($4746), and PPO ($4890) plans (p-value < 0.01). This trend held for all subgroups, with hospitalization for women being more costly than for men, $4244 versus $3397 in average for capitated (p-value < 0.01) and $5090 versus $4204 in average for non-capitated plans (p-value < 0.01), and for all age cohorts. CONCLUSION: The mean payment for outpatient visits and for hospitalizations for asthma patients in capitated health plans were significantly lower than for non-capitated plans, and these savings in payment were especially apparent for the case of outpatient care. Further studies are necessary to determine if these “savings” are consistent with quality asthma outcomes.