hospitalization claims was searched from January 1, 1995 to December 31, 2000 to identify patients. Healthcare utilization and associated costs were studied one year prior to the start of salmeterol therapy and one year after. Log transformations were done to normalize the data. Paired t-tests were performed to assess differences in asthma-related healthcare utilization and costs in the pre and post-salmeterol periods. RESULTS: Short-acting β2-agonist utilization increased from an average of 7.63 claims (SD = 7.45) in the pre-salmeterol period to an average of 8.39 claims (SD = 6.73) in the post-salmeterol period (t = -2.34, p = .022) and the costs increased from an average of $217.56 (SD = 264.13) in the pre-salmeterol period to an average of $219.31 (SD = 231.65) in the post-salmeterol period (t = -2.30, p = .024). Inhaled steroid use increased significantly from an average of 3.36 claims (SD = 4.55) in the pre-salmeterol period to an average of 6.29 claims (SD = 4.26) in the post-salmeterol period (t = -7.87, p = .00) and the costs also increased from an average of $149.82 (SD = 234.10) in the pre-salmeterol period to an average of $313.50 (SD = 269.74) in the post-salmeterol period (t = -7.40, p = .00). Total medication costs increased from $559.74 (SD = 655.08) in the pre-salmeterol period to $1155.51 (SD = 604.70) in the post-salmeterol period (t = -8.27, p < 0.001). Total healthcare costs also increased significantly from $1356 to $2649 in the post-salmeterol period (t = -6.89, p < 0.001. CONCLUSIONS: The introduction of salmeterol increased overall asthma-related healthcare utilization and costs but this may have been due to increasing asthma severity in this population as indicated by the increased utilization of short-acting β2-agonist and inhaled steroids.

OBJECTIVES: We studied the cost implications of putting moderate or severe adult asthma patients on combined long-term-control drug therapy (inhaled corticosteroids + long-term-control bronchodilators) versus on inhaled corticosteroids alone. METHODS: The study sample was retrospectively selected from Medi-Cal eligibles between January 1995 and December 2000. The final data set included 1547 patients. The targeted asthma patient population was moderate and severe adult asthma patients who recently had an asthma-related urgent event (asthma related hospitalization or emergency care). One-year total healthcare cost was compared between the combined therapy and the monotherapy. Both the average treatment effect (ATE) and the treatment effect on the treated (TT) were estimated. A linear outcome-equation model and a propensity score method were applied to adjust for observed selectivity, and a parametric switching regression model for both observed and unobserved selection bias. Sociodemographic variables, comorbidity, previous healthcare cost, key-event type, and drug utilization were adjusted. All costs were adjusted to 1999 U.S. dollars using the medical care CPI. RESULTS: When adjusting only the observed selectivity using either the linear outcome-equation model or the propensity score method, we found no statistical significant difference in one-year total health care costs between the combined
OBJECTIVES: To assess the utilization and costs for medical resources and pharmacotherapy among patients with asthma in a state Medicaid population. METHODS: Outpatient, hospital and emergency department (ED) claims with a primary ICD-9 code for asthma (493.XX) dated between January 1 through December 31, 1999 were extracted from a state Medicaid claims database. Unique recipient identifiers obtained from these claims were then used to extract asthma-related prescription claims. Medicaid reimbursements were used to calculate costs for outpatient, ED and prescription drug use, and 1999 Medicare DRG reimbursement amounts provided by the Centers for Medicare and Medicaid Services (CMS) were used to calculate hospital costs. Based on the pharmacotherapy received, recipients were classified into one of four categories: 1) short-acting beta-agonist use only; 2) use of combination therapy without inhaled anti-inflammatory medications; 3) use of any inhaled anti-inflammatory therapy (inhaled corticosteroids, cromolyn, or nedocromil); or 4) no prescription claims for asthma-related medications. Medicaid reimburments were used to calculate costs for outpatient, ED and prescription drug use, and 1999 Medicare DRG reimbursement amounts provided by the Centers for Medicare and Medicaid Services (CMS) were used to calculate hospital costs. Based on the pharmacotherapy received, recipients were classified into one of four categories: 1) short-acting beta-agonist use only; 2) use of combination therapy without inhaled anti-inflammatory medications; 3) use of any inhaled anti-inflammatory therapy (inhaled corticosteroids, cromolyn, or nedocromil); or 4) no prescription claims for asthma-related medications. RESULTS: Overall asthma prevalence was 17.7/1000 Medicaid recipients. METHODS: Outpatient, hospital and emergency department (ED) claims with a primary ICD-9 code for asthma (493.XX) dated between January 1 through December 31, 1999 were extracted from a state Medicaid claims database. Unique recipient identifiers obtained from these claims were then used to extract asthma-related prescription claims. Medicaid reimbursements were used to calculate costs for outpatient, ED and prescription drug use, and 1999 Medicare DRG reimbursement amounts provided by the Centers for Medicare and Medicaid Services (CMS) were used to calculate hospital costs. Based on the pharmacotherapy received, recipients were classified into one of four categories: 1) short-acting beta-agonist use only; 2) use of combination therapy without inhaled anti-inflammatory medications; 3) use of any inhaled anti-inflammatory therapy (inhaled corticosteroids, cromolyn, or nedocromil); or 4) no prescription claims for asthma-related medications. The hospitalization rate was 21 hospitalizations/10,000 recipients at a mean cost of $3737 (SD = $1322) per visit per recipient (pvpr). The rates of outpatient and ED use were 21 outpatient visits/1000 recipients, and 69 ED visits/10,000 recipients. The mean cost pvpr for outpatient and ED use was $54 (SD = $72) and $101 (SD = $126), respectively. The total asthma-related expenditures to Medicaid were: $2,690,777 for hospitalizations; $236,857 for ED use; and $1,813,240 for prescription use. CONCLUSIONS: Asthma is responsible for a substantial economic burden to Medicaid, with hospital use accounting for most of the dollars.