To assess the relationship between COPD exacerbations and controller therapy duration. METHODS: Data from 2 large US proprietary health claims data bases were pooled to create a prevalent cohort of patients with COPD and an index date defined as first controller therapy fill from January 1, 2004–March 31, 2008. Inclusion criteria were a COPD diagnosis ICD-SCM 491, 492, or 496, ≥12 months of pre- and post-index date enrollment, ≥1 pharmacy claim, age ≥40 years, and no lung cancer. Controller therapy included inhaled corticosteroids, long-acting β agonists, flunisolide/salmeterol combination, or tiotropium bromide. Logistic regression models assessed the risk of exacerbation-related events (hospitalization, emergency department (ED) visits, oral corticosteroid (OCS) or antibiotic prescriptions) associated with claim-identified therapy duration, controlling for age, sex, prior health care utilization, and comorbidities. RESULTS: Of the 45,657 patients (45%, men; mean age, 60 years), 11.28% had a hospitalization; 2.70% an ED visit; 42.12%, an OCS prescription; and 74.99% an antibiotic prescription. The annual rate of events per patient included 0.48 hospitalizations, 0.04 ED visits, 2.43 antibiotic prescriptions, and 1.18 OCS prescriptions. Controller therapy duration for claims of the cohort included 0–90 days in 31%, 91–180 days in 17%, 181–270 days in 11.5%, and 271–365 days in 20.4%. Compared with patients whose therapy lasted 1–90 days, the exacerbation event risk was no different from that for those with 91–180 days (odds ratio [OR], 0.98; 95% CI, 0.92–1.05), 9% higher for those with 181–270 days (OR, 1.09; 95% CI, 1.01,1.18), and 10% higher for those with 271–365 days (OR, 1.18; 95% CI, 1.11,1.27). Similar results were observed for ED visit event. CONCLUSIONS: The inverse relationship between controller therapy duration and COPD exacerbations, while potentially confounded by disease severity, suggests reducing symptoms earlier may improve controller therapy duration and reduce exacerbation risk.

**RESPIRATORY-RELATED DISORDERS – Cost Studies**

**PR57 IMPACT OF STATIN THERAPY ON ASTHMA-RELATED EVENT COSTS IN ADULT ASTHMA PATIENTS**

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OBJECTIVES: Statins exert anti-inflammatory effects that may have a positive impact on asthma. This study explored the association of statin exposure with asthma-related events and costs. METHODS: This was a retrospective analysis of the 12+ million person Medco National Integrated Database. Adult patients receiving inhaled corticosteroid (ICS) therapy between January 2006 to December 2006, and 21 hospitalization/emergency room (ER) visit for asthma (ICD9 493.XX) in the previous 12 months from first-occuring ICS prescription were selected. Patients were then stratified by statin exposure, and were followed for 1 year to assess the risk of the primary event endpoint of asthma-related hospitalization/ER visit (ICD9 493.XX). Event costs per patient-year of follow-up (2009 $US) were calculated using age-specific Healthcare Cost and Utilization Project (HCUP) data for ICD9 493.XX-related 2006 hospitalization and 2005 ER events inflated by 5%/year. Costs were derived from HCUP charges applying an actual cost; charge ratio of 0.4 for hospitalization, and an estimated ratio of 0.6 for ER visits. RESULTS: A total of 6574 patients were studied (4471 statin-unexposed; 2103 statin-exposed). Overall mean ± SD age was 61 ± 16 years, 29% were male, and 19% had ≥2 asthma hospitalization/ER events in the previous 12 months. Asthma therapy included beta agonists (short-acting 65%; long-acting 37%) and leukotriene modifiers (38%). Hospitalization/ER event incidence was 29.4% in statin-unexposed patients versus 20.5% in statin-exposed patients [odds ratio 0.67 (95% CI 0.58–0.76; p < 0.0001) adjusted for age, gender, previous asthma events and asthma therapy]. Hospitalization/ER event costs per patient-year were $1354 in statin-treated patients and $1123 in untreated patients ($236; −17%). Statin therapy reduced both hospitalization ($52 per yr; −18%) and ER ($63 per yr;