

Abstracts

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in the ICS group, the difference in mortality rate was not statistically significant (Hazard Ratio: 0.77 CI: 0.52; 1.15). However, there was a significant quality-of-life benefit in favor of ICS. **CONCLUSIONS:** Despite a lack of significance in survival benefits, joint considerations of quality of life and survival indicate that ICS could be considered potentially cost-effective. Imputation methods can be employed to address missing data issues when the extent of missingness is not too extreme.

PCO4

EPISODES OF RESPIRATORY CARE FOR MANAGED CARE PATIENTS WITH COPD: ASSESSING THE ECONOMIC BURDEN
Brown JS¹, Marton JP², Friedman M¹, Chace M¹, Menzin J¹

¹Boston Health Economics, Inc, Waltham, MA, USA; ²Pfizer, US Outcomes Research Group, New York, NY, USA

OBJECTIVES: The study objective was to use administrative claims to create episodes of acute respiratory care as a means of better understanding the economic burden of acute treatment of COPD. **METHODS:** Respiratory-related medical (ICD-9-CM 480.xx–519.xx) and pharmacy claims were extracted from a managed care database for all patients 30 years of age or more who were diagnosed with COPD (ICD-9-CM 491.xx, 492.xx, and 496.xx) between 1997 and 2001. Acute respiratory-related services were categorized as inpatient treatment, emergency room (ER) treatment, or an office visit combined with an antibiotic or oral steroid dispensed within three days of the visit. Episodes of care were created by continuously combining acute medical claims until a gap of 14 days or longer were found between claims. Acute services after such a gap began a new episode. Each patient was tracked longitudinally and all episodes during the study period were included. Study measures included service location, duration, and health plan payments (in 2002 \$US). **RESULTS:** The average age of the 164,566 patients was 68 years, and 50% were male. Patients received more than 510,000 unique acute respiratory medical services; 37% were inpatient, 22% ER, and 41% office visits. These services were combined to create 385,352 episodes (1.3 unique medical services per episode), of which 45% involved inpatient care. The average duration of episodes involving hospitalization was 10.6 days, with a mean payment of \$12,661. These episodes lasted 2.6 days longer and payments were 12% more than individual hospital stays. Approximately 10–15% of outpatient episodes involved multiple ER or office visits. Mean payments for office visit and ER episodes, including acute drug costs, were \$231 and \$841, respectively. **CONCLUSIONS:** Combining individual claims for acute respiratory services into episodes of care provide a more comprehensive estimate of the costs of respiratory exacerbations for patients with COPD.

PCO5

ECONOMIC BURDEN OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) IN A STATE HEALTH INSURANCE PROGRAM

Joshi AV¹, Madhavan SS², Ambegaonkar AJ³, Smith M², Scott V², Dedhia H²

¹West Virginia University/Pfizer Inc, Morgantown, WV, USA; ²West Virginia University, Morgantown, WV, USA; ³Pfizer Inc, New York, NY, USA

OBJECTIVE: Chronic obstructive pulmonary disease (COPD) is the fourth-leading cause of death in the United States and accounts for about 14 billion dollars annually. This study assesses the economic burden of COPD in a state health insurance program in terms of medical resources and pharmacotherapy from a payer perspective. **METHODS:** Outpatient, hospital and emergency department (ED) claims with a primary ICD-9

code for chronic bronchitis (491.xx), emphysema (492.xx), and chronic airways obstruction (496.xx) dated between July 1, 2001 and June 30, 2003 were extracted from the claims database of a state health insurance program. Unique recipient identifiers obtained from these claims were then used to extract COPD-related prescription claims. Payer reimbursements were used to calculate costs. Rates of use of maintenance medications was assessed for the following therapeutic classes: 1) use of any inhaled anti-inflammatory therapy (inhaled corticosteroids, cromolyn, nedocromil, and 2) use of “other” maintenance drugs such as long-acting beta-agonists, leukotriene modifiers, anticholinergics, and theophylline agents. **RESULTS:** Overall, COPD prevalence was 52.2/1000 recipients. Of the 7165 recipients identified with COPD, 11.8% (N = 848) received inhaled anti-inflammatory drugs, and 19.4% (N = 1389) received “other” maintenance medications for COPD. The hospitalization rate was 7.9 hospitalizations/10,000 recipients, at a mean cost of \$1322 (SD = \$1025) per visit per recipient (pvpr). The rates of outpatient and ED use were 112 outpatient visits/1000 recipients, and 56 ED visits/10,000 recipients, respectively. The mean cost pvpr for outpatient and ED use was \$51 (SD = \$72) and \$69 (SD = \$80), respectively. The total COPD-related annual average expenditures to the payer were \$10,051,244 of which prescription use accounted for 95%, followed by outpatient use (4%), hospitalizations (0.7%), and ED use (0.3%). **CONCLUSIONS:** COPD exerted a significant burden on the payer. Although prescription use accounted for the most dollars, hospital use and costs were significantly lower than national estimates.

CHRONIC OBSTRUCTIVE PULMONARY DISEASE

CHRONIC OBSTRUCTIVE PULMONARY DISEASE—Quality Of Life Studies

PCO6

HEALTH-RELATED QUALITY OF LIFE IN PATIENTS WITH CHRONIC RESPIRATORY DISEASE

Joshi AV¹, Madhavan SS², Ambegaonkar AJ³, Smith MJ², Scott V², Dedhia H²

¹West Virginia University/Pfizer Inc, Morgantown, WV, USA; ²West Virginia University, Morgantown, WV, USA; ³Pfizer Inc, New York, NY, USA

OBJECTIVE: Chronic respiratory illnesses such as asthma and chronic obstructive pulmonary disease (COPD) not only impact economic outcomes, but they also impact patients’ health-related quality of life (HRQL). The objective of this study was to assess the HRQL in patients with asthma and COPD. **METHODS:** All employees receiving health benefits through a state health insurance program constituted the study population. Recipients having medical claims with a primary ICD-9 code for asthma (493.xx), chronic bronchitis (491.xx), emphysema (492.xx), or chronic airways obstruction (496.xx) between July 1st, 2001 and June 30th, 2003, were selected. These patients were classified as having asthma-only, COPD-only, or having both asthma and COPD, based on ICD9 codes. These patients were mailed the St. George’s Respiratory Questionnaire (SGRQ), which has been validated for measuring HRQL in patients with asthma as well as COPD. The SGRQ consists of 3 subscales: symptoms, activity, and impacts, as well as a summary score, each ranging from 0 to 100, with higher scores indicating worse HRQL. T-tests and ANOVAs were used to compare HRQL between the 3 groups. **RESULTS:** Overall prevalence of chronic respiratory disease was 69.9/1000 recipients (asthma n = 1493; COPD n = 7165; both n = 940). Overall survey response rate (RR) was 22.6% (asthma