

PRS3

**ACUTE EXACERBATION OF CHRONIC BRONCHITIS (AECB) TREATMENT EFFECTIVENESS: COMPARISON OF MACROLIDES TO FLUOROQUINOLONES**Wu EQ<sup>1</sup>, Birnbaum H<sup>1</sup>, Cifaldi M<sup>2</sup>, Kang YJ<sup>1</sup>, Colice GL<sup>3</sup><sup>1</sup>Analysis Group, Inc, Boston, MA, USA; <sup>2</sup>Abbott Laboratories, Abbott Park, IL, USA; <sup>3</sup>Washington Hospital Center, Washington, DC, USA

**OBJECTIVES:** The purpose of this study is to compare the effectiveness of fluoroquinolones versus macrolides in treating AECB. **METHODS:** The study sample was identified from a large employer claims database covering the period 1999–2002. Patients age 18–65 years with at least one diagnosis of AECB were included in the study sample. The sample was further restricted to AECB patients who had 13 months pre-index date continuous eligibility. The index date was defined as the date of the first prescription of either a macrolide or a fluoroquinolone during the period between 14 days before an AECB diagnosis and 30 days following the diagnosis. The effectiveness, measured by treatment failure rate, of fluoroquinolones and macrolides, were compared using multivariate logistic regression adjusting for gender age, season of the year, additional oxygen therapy, and patient COPD severity as measured by a severity score developed by Wu, et al. Treatment failure rate was defined as occurrence of hospitalization, ER visit, switching of antibiotics, filling of a second prescription of antibiotic, or use of oral corticosteroids within one-month following the index date, and was compared using odds ratio (OR). Patients were categorized into severe COPD (top 25% of severity distribution) and non-severe (moderate/mild) COPD patients. **RESULTS:** When treated with macrolides, severe COPD patients had significantly lower failure rates compared with patients on fluoroquinolones (OR = 2.01,  $p = 0.03$ ). There are no differences in failure rate between macrolides and fluoroquinolones in treating moderate and mild COPD patients. **CONCLUSIONS:** Macrolides are more effective first line therapies compared to fluoroquinolones when treating flare-ups of severe COPD patients.

PRS4

**ESTIMATING THE NUMBER OF CASES OF DIAGNOSED CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD): USE OF MEDICAL CLAIMS DATA VERSUS ALTERNATIVE METHODOLOGIES**Miller JD<sup>1</sup>, Boulanger L<sup>1</sup>, Russell MW<sup>1</sup>, Marton J<sup>2</sup>, Menzin J<sup>1</sup><sup>1</sup>Boston Health Economics, Inc, Waltham, MA, USA; <sup>2</sup>Pfizer Inc, New York, NY, USA

**OBJECTIVES:** To estimate the prevalence and annual incidence of diagnosed COPD from medical claims data and to compare results with those derived through alternative methodologies. **METHODS:** Claims data were acquired from a US managed care organization database with records for approximately ten million members in 20 states. The COPD cohort comprised patients aged 25+ years with one or more medical claims with a COPD diagnosis in 2002. For prevalence, patients were required to be eligible for coverage during 2002, while patients in the incidence estimation were required to be eligible for medical coverage in both 2001 and 2002 but without any COPD diagnoses in 2001. Claims-based estimates of prevalence and incidence (overall and by age group) were compared to corresponding published data from other sources. **RESULTS:** We identified 64,141 patients with a diagnosis of COPD (an overall prevalence of 3.7%). Prevalence progressively increased from 0.3% in patients aged 25–34 years to 11.8% in patients aged 75+ years. These estimates are generally lower than other sources. For example, National Health Interview Survey estimates, based on respon-

dent self-reported COPD or recall of being told they have the disease, ranged from 3.9% to 10.6% in the youngest and oldest age groups, and were about 6.0% overall. A total of 7347 newly-diagnosed COPD patients were found, generating an annual incidence rate of 0.95%. Rates increased from 0.08% in patients aged 25–34 years to 2.07% in patients aged 75+ years, somewhat higher than estimates from European studies that used general practitioner case registrations as a data source. No comparable U.S. studies could be identified. **CONCLUSION:** Disparities exist in epidemiological estimates of COPD depending on data, patient populations, and methodologies employed. Further studies are needed to clarify the most valid and reliable data and methods for studying the epidemiology of diagnosed COPD.

PRS5

**EVALUATION OF THE ASSOCIATION BETWEEN SEVERITY OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) WITH HEALTH-RELATED UTILITY (EQ5DINDEX) AND HEALTH CARE RESOURCE USE**Currie CJ<sup>1</sup>, Griffiths T<sup>1</sup>, Gosden T<sup>2</sup>, Morrissey M<sup>1</sup>, Patel TC<sup>3</sup>, McEwan P<sup>1</sup><sup>1</sup>Cardiff University, Cardiff, UK; <sup>2</sup>Pfizer Limited, Surry, UK;<sup>3</sup>University Hospital of Wales, Cardiff, UK

**OBJECTIVE:** COPD is a progressive and debilitating disease. The purpose of this study was to directly characterize utility and hospital resource use in people with COPD. **METHODS:** Data were abstracted from the Health Outcomes Data Repository (HODaR) describing the treatment patterns and outcomes of 299 subjects with COPD with corresponding lung function measurements. Patients were classified according to the GOLD classification based on their actual to predicted FEV<sub>1</sub> values. Predicted FEV<sub>1</sub> values were estimated from a subjects' height, age and sex. These patients were hospital treated subjects. Total mean number of visits to/from a GP and practice nurse were calculated in the six weeks prior to the survey, along with a measure of utility (EQ5D<sub>index</sub>). **RESULTS:** Of the 299 subjects, there were 11 (3.7%), 74 (24.7%), 140 (46.8%) and 74 (24.7%) in GOLD classes I to IV, respectively. There was an inverse association between the GOLD classification and mean EQ5D<sub>index</sub>: 0.52 (0.27), 0.44 (0.34), 0.42 (0.33) and 0.39 (0.31), for GOLD classes I to IV, respectively. Regarding resource use, in the year prior to their most recent FEV<sub>1</sub> measurement was on average 2.1, 2.3, 2.4 and 2.1 hospital admissions for GOLD I to IV, respectively. Additionally, the mean length of stay in the previous year was 11.6, 16.6, 17.7 and 17.3 days, correspondingly. Mean (SD) primary care visits increased from 2.9 (2.5) per person for GOLD-I to 4.6 (7.4) for GOLD-IV, respectively. **CONCLUSIONS:** The EQ5D<sub>index</sub> estimates showed clearly that this disease results in very poor quality of life, and that this is inversely associated with disease severity. COPD was also extremely resource intensive in all stages of disease severity. The changes in the lungs of patients with COPD are irreversible; however, active chronic disease management strategies may impact on the financial and humanistic cost of this disease.

PRS6

**COMPARISON OF RESOURCE USE AND DIRECT COSTS OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE WITH AND WITHOUT COMORBID DEPRESSION IN 2001**

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**OBJECTIVES:** The objectives of this study were to determine and compare resource utilization and direct costs for adults diagnosed with chronic obstructive pulmonary disease with and