severity is a common source of bias. Consequently, failure to properly control for the bias could lead to serious flaws in the study. METHODS: We used a novel approach for identifying comorbidities associated with COPD by mapping the incident comorbid patterns in the pre-COPD diagnosis period as well as over the course of the diagnosis and treatment period of a representative cohort of patients >65 years old in the UK General Practice Research Database. Each patient was matched to another without COPD on year of birth, sex, general practice and completed years of medical records up to at least a year after the index date for COPD between 1990 and 1998. We identified 24,000 such pairs that also satisfied a requirement for at least one medical consultation and at least one prescription for any drug in the year prior to the index date for COPD. RESULTS: Based on trends in rate ratios, we found significant time-dependent associations between the incident COPD diagnosis and incident comorbid conditions such as lung cancer, myocardial infarction, pneumonia, chronic obstructive pulmonary disease, diabetes, osteoporosis, urinary incontinence, skin bruises, psychotic disorders and respiratory infections. CONCLUSIONS: The results indicated interesting associations which could help improve our understanding of the natural history of COPD and its burden. This methodology can be used to identify important comorbidities for effective comparative assessments.

**PR54**

**EFFECTIVENESS OF VARENICLINE COMPARED TO BUPROPION AND NICOTINE REPLACEMENT THERAPY (NRT) FOR SMOKING CESSATION IN TWO SMOKING SPECIALIZED UNITS OF THE SPANISH PRIMARY CARE SETTING**

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Objective: To estimate the effectiveness of varenicline, nicotine replacement therapy (NRT) and bupropion for smoking cessation in specialized smoking units belonging to primary care centers. METHODS: A multi-center longitudinal observational study was designed. Patient’s data were collected retrospectively based on their clinical records. The average age of 18, who initiated smoking cessation between January 1, 2006 and January 12, 2008 with varenicline, bupropion or NRT were included in the analysis. The patient’s follow-up was conducted from time-line (day 1) and assessed at 6 and 12 months. Main variables included in the study were: comorbidities, effectiveness (continuous abstinence) and pharmacological tolerability. Statistical analysis was performed by Kaplan-Meier survival curves, P < 0.05. RESULTS: A total of 937 smokers patients treated with NRT (53.0%), bupropion (25.1%) and varenicline (21.9%) were included in the analysis. The mean age of participants was 47.6 (11.3) years and 58.6% were men. The average duration of smoking was 19.1 (6.7) years. At 6 months, 61.2% (95% CI; 54.6–67.8%) of participants in the varenicline group were continuously abstinent from smoking compared with 56.9% (95% CI; 50.6–63.2%) in the bupropion group and 52.3% (95% CI; 48.0–56.6%) in the NRT group. At 12 months, the rate of continuous abstinence was 57.4% (95% CI; 50.7–64.1%) in the varenicline group compared with 52.9% (95% CI; 46.6–59.2%) in the bupropion group and 47.1% (95% CI; 42.8–51.4%) in the NRT group. P = 0.002. Pharmacological tolerability was similar between groups except for symptoms of irritability which were lower in the varenicline group: 4.3% compared to 8.3% in the bupropion group and 10.3% in the NRT group. CONCLUSIONS: Varenicline appeared to be an effective and safety alternative compared with bupropion and NRT on smoking cessation in the primary care setting.

**PR55**

**BUDESONIDE/FORMOTEROL PLUS TIOTROPIUM (BUD/FORM + TIO) VS. SALMETROL/FLUTICASONE PLUS TIOTROPIUM (SALFLU/MU + TIO): A SYSTEMATIC REVIEW AND ADJUSTED INDIRECT COMPARISON BETWEEN TWO ALTERNATIVE TRIPLE TREATMENTS IN CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)**

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OBJECTIVES: Use of triple therapy (long-acting beta2 agonist [LABA], inhaled corticosteroid [ICS] and long-acting muscarinic antagonist [LAMA]) for the treatment of COPD has doubled in the UK over the past 5 years for all severities of the disease. This research was designed to compare the two most commonly prescribed combination inhalers (BUDFORM and SALFLU/MU) as the basis of triple therapy with TIO, the most widely used LAMA. METHODS: Systematic review of CENTRAL, EMBASE and MEDLINE for randomised controlled trials (RCTs) in patients with COPD treated with BUDFORM+TIO or SALFLU/MU+TIO was conducted in May 2010. Mixed treatment comparison (MTC) using TIO as a common comparator was conducted using a Bayesian Markov Chain Monte Carlo simulation. Fixed- and random-effects models were explored with the preferred model selected based on the Deviance Information Criterion (DIC). Data was extracted from relevant trials on severe exacerbations (decrease in FEV1 ≥ 20% from baseline) and rescue medication-free days. Results: Of the 124 papers identified in the literature search, 3 RCTs had comparable patient populations and were able to supply data for analysis (1 BUD/FORM+TIO [N = 660] and 2 SALFLU/MU+TIO [N = 301 and N = 60]). The exclusion of papers was based on not meeting all of the following inclusion criteria: RCTs of the chosen comparators; COPD patient population; reporting exacerbations; English-language full publications; and non-duplicates. When the fixed- and random-effects MTC models were compared the fixed-effects MTC had the lowest DIC. The results indicate a 55% relative reduction in severe exacerbations with BUD/FORM+TIO compared to SALFLU/MU+TIO (OR 0.45, 95% CI 0.22 to 0.83). CONCLUSIONS: This MTC suggests that BUD/FORM-based triple therapy is significantly more effective at reducing severe exacerbations than SALFLU/MU-based triple therapy.
QUALITY OF LIFE AND ECONOMIC IMPACT OF ASTHMA CONTROL IN FRANCE AND SPAIN. FIRST RESULTS OF THE EU-COAST STUDY

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OBJECTIVES: Current asthma management recommendations are based on the level of asthma control rather than disease severity. The financial impact associated with asthma control needs to be determined. The primary objective of this study was to estimate quality of life and health care costs according to the patients’ level of asthma control in France and in Spain. METHODS: An observational retrospective bottom-up cost of illness study was conducted in adults patients with asthma. Investigators were general practitioners. Asthma control was evaluated using the validated auto-test Asthma Control Test (ACTTM) for a one month period and 2009 GINA’s asthma treatment recommendations by severity def. Conclusions: Quality of life and health care costs were directly related to asthma control in both countries. The French and Spanish patients respectively. In both countries, EQ-5D scores were 0.90 in well controlled asthma compared with 0.82 in moderate and 0.69 in poorly controlled asthma patients. In France, costs varied from EUR 394/month/patient in well controlled asthma patients to EUR 3278 in those without asthma control. The average cost (Euros/month/patient) of well-controlled asthma was EUR 1586 and EUR 1360 in France and Spain respectively. The total costs of asthma were directly related to asthma control in both countries. Based on the ACT, asthma was determined to be well-controlled in 36% in France and in 73% in Spain.

RESULTS: Total costs of asthma were directly related to asthma control in both countries. The French and Spanish patients respectively. In both countries, EQ-5D scores were 0.90 in well controlled asthma compared with 0.82 in moderate and 0.69 in poorly controlled asthma patients. In France, costs varied from EUR 394/month/patient in well controlled asthma patients to EUR 3278 in those without asthma control. The average cost (Euros/month/patient) of well-controlled asthma was EUR 1586 and EUR 1360 in France and Spain respectively. The total costs of asthma were directly related to asthma control in both countries. Based on the ACT, asthma was determined to be well-controlled in 36% in France and in 73% in Spain.

CONCLUSIONS: Ciclesonide provides an improvement in spirometer paramaters and reduction of asthma symptom-free days as compared to budesonide in 1.1 dose ratio, while no differences were noticed between CIC and BUD in 1.2 dose ratio. Safety profile of ciclesonide seems to be comparable with budesonide.