Large retrospective databases provide valuable information to examine adverse events associated with PN, which can be reliably identified and studied. Both sensitivity analysis and model validation added credibility to our approach.

RESPIRATORY-RELATED DISORDERS – Clinical Outcomes Studies

PR51 A COMPARISON OF CLINICAL PROFILES, MEDICATION USE AND SYMPTOMATOLOGY IN ASTHMA PATIENTS PRESCRIBED LOW/MODERATE DOSE FLUTICASONE PROPIONATE/SALMETEROL OR MODERATE/HIGH DOSE FLUTICASONE PROPIONATE/INHALATION BURBRENE 

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OBJECTIVES: National asthma treatment guidelines recommend the use of low dose ICS plus a LABA or moderate to high dose ICS as the preferred treatment for moderate asthma. The purpose of this study was to determine if physicians prescribe low/moderate dose fluticasone propionate/salmeterol (FSC) or moderate/high dose fluticasone propionate (FP) to subjects with similar asthma clinical profiles, medication use, and symptomatology. METHODS: This was a retrospective observational study using medical, pharmacy, and enrollment information from a large, US managed care plan and linked medical chart data comparing 3 years of baseline characteristics and medication treatment patterns in adult asthma patients initiating FSC or FP. Data acquired from medication claims and medical claims included provider specialties, asthma medications, medication resource use, occurrence of spirometry testing, and Deyo-Charlson co-morbidity score. A random sample of medical charts (n = 460) was abstracted for baseline symptomology. RESULTS: A total of 32,189 subjects (average age: 46.6 ±14.4 years; 64% female; 36.0% current smoker) were diagnosed and initiated with asthma medications. Some 17 binary comorbidities were analysed in relation to risk of mortality and re-hospitalisation. We tested the null hypothesis (A), that there were no significant differences in either diagnosis or treatment of asthma symptomology were observed between patients prescribed low/moderate dose FSC or moderate/high dose FP for the first time. Overall, physicians seem to be prescribing low/moderate dose FSC and moderate/high dose FP to similar asthma patients in alignment with national asthma treatment guidelines.

PR52 A NOVEL METHODOLOGY FOR MEASURING THE INFLUENCE OF COMORBIDITY IN HEALTH OUTCOME STUDIES

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OBJECTIVES: In most studies, the influence of comorbidity is modelled additively as the number of comorbidities present or by an index (such as Charlson’s) chosen without regard to the outcome of interest. We question these approaches with a novel methodology noting that: outcome may not be associated linearly with comorbidity count, the weights combining a set of binary comorbidities need not be positive (i.e. hypothesis (B) that outcome worsens with increasing comorbidity may be false), and our ability to identify specific interactions influencing prognosis is lost. METHODS: We analyzed a retrospective cohort of 3332 patients, aged 50+ in the UK General Practice Research Database diagnosed with COPD between 1990 and 1998, and with a first COPD hospitalisation. Some 17 binary comorbidities were analysed in relation to risk of mortality and re-hospitalisation. We tested the null hypothesis (A), that comorbidity was similar in each layer of the two outcomes, crudely and adjusting for age and sex. Our methodology relies on logistic and log-linear modelling strategies for multidimensional contingency tables. RESULTS: For both outcomes, hypothesis (A) was rejected (p < 0.001). Although comorbidity was found to influence death and rehospitalisation, the patterns of influence on the two outcomes were not similar and there were some with negative influence (i.e. comorbidities more frequent among survivors), thus rejecting hypothesis (B). METHODS: This was a retrospective observational study using medical, pharmacy, and enrollment information from a large, US managed care plan and linked medical chart data comparing 3 years of baseline characteristics and medication treatment patterns in adult asthma patients initiating FSC or FP. Data acquired from medication claims and medical claims included provider specialties, asthma medications, medication resource use, occurrence of spirometry testing, and Deyo-Charlson co-morbidity score. A random sample of medical charts (n = 460) was abstracted for baseline symptomology. RESULTS: A total of 32,189 subjects (average age: 46.6 ±14.4 years; 64% female; 36.0% current smoker) were diagnosed and initiated with asthma medications. Some 17 binary comorbidities were analysed in relation to risk of mortality and re-hospitalisation. We tested the null hypothesis (A), that there were no significant differences in either diagnosis or treatment of asthma symptomology were observed between patients prescribed low/moderate dose FSC or moderate/high dose FP for the first time. Overall, physicians seem to be prescribing low/moderate dose FSC and moderate/high dose FP to similar asthma patients in alignment with national asthma treatment guidelines.

PR53 THE PREVALENCE OF COMORBID CONDITIONS IN U.S. PATIENTS DIAGNOSED WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD)

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OBJECTIVES: COPD is the 4th leading cause of death among U.S. adults. Retrospective observational studies, including outcomes research, can provide important complementary analyses to help identify optimal treatment patterns and therapies. However, such comparisons often require multivariate analysis, propensity score matching, a comorbidity index or other methods to adjust for differences in patient characteristics. Rates reported in clinical trials often vary significantly from those observed in clinical practice. Using this study was done to determine the frequency of diagnosed comorbid conditions in the COPD population and serve as a research reference for future comparative studies. METHODS: Private practitioner medical claims (CMS1500 records) from SDH Health’s data warehouse were extracted for the 4th quarter November 1, 2007 to October 21, 2008. Patients were identified using the first observed COPD diagnosis during the study period. Qualifying patients had 2 or more claims for COPD; a valid age and gender; and were observed in the dataset for 12 months or more from their index date. Patients could be diagnosed with COPD prior or post the study period or new to the condition. Comorbid conditions of interest were defined a priori. As possible, MEDRA codes used in clinical trials were cross-walked to corresponding ICD-9 codes. All payer types were included. RESULTS: Of the 751,794 qualifying study patients, the mean age was 67.5 years (STDEV = 13) and 55.4% were female. The 1 year prevalence of comorbid conditions was: Supraventricular Arrhythmia13.2%, Atrial Fibrillation 9.7%, Depression 9.0%, Suicide 0.1%, Insomnia 4.1%, Ischemic disease (ATPC composite) 28.8%, Metabolic Syndrome 0.4%, and Other Mental Health conditions 14.7%. CONCLUSIONS: Patients with COPD have a variety of significant comorbid conditions observed in real-world, clinical practice. These factors can affect findings of comparative studies and are important considerations for future research.