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meningococcal disease conditional on carriage (q) to US incidence data. Calibration used the maximum likelihood method; goodness-of-fit was assessed using deviance. **RESULTS:** The calculated β for infant-to-infant transmission is 1.86 effective contacts per 100,000 infants per year. β peaks at 29.7/100,000 for transmission between 14 year olds and 11–14 year olds, and ranges from 0 to 16.3/100,000 for adult-adult transmission. The q is highest in infants (0.015), declines steeply and plateaus at 0.00013 in those aged >20 years. The model predicted yearly cases of ACWY-related meningococcal disease are 132 among infants, 439 among 1–20 year-olds, and 202 among those aged >20, compared with 129, 433, and 211 for US benchmarks (deviance = 184, with 72 degrees of freedom). **CONCLUSIONS:** Calibration techniques can be used to adapt a UK meningococcal disease model to the US using modified serogroup and contact data such that a reasonable fit is achieved with US benchmarks.

RESPIRATORY-RELATED DISORDERS— Clinical Outcomes Studies

PRS1

SMOKING, ASTHMA AND COPD IN ADULTS: A TOO FREQUENT RELATION

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OBJECTIVES: To determine the relation with active smoking patients in presence of asthma and COPD, and to know its association with some cardiovascular risk factors and its cost repercussion of attended patients in a Spanish population setting. **METHODS:** Multi-centric retrospective design realised beginning from subjects older than 14 years demanding assistance during year 2006. Smoking habit, asthma and COPD were defined as a clinical illness obtained according to International Classification CIAP-2. Main measures: age, gender, co-morbidities (cardiovascular), Charlson index (patient severity) and costs model (fixed/semi-fixed: in operation) and variable ones (diagnostics/therapeutics tests and referrals). Statistic analysis: logistics regression and covariance (ANCOVA) for the correction of the model (recommendations: Thompson-Barber). Program SPSSWIN, $p < 0.05$. **RESULTS:** A total of 65,768 patients (use: 73.1%; frequentation: 4.7 visits/100 inhabitants). The 4.1% (n = 2,693, confidence intervals of the 95% [CI]: 3.9–4.3%) presented asthma and the 2.7% (n = 1,769, CI: 2.6–2.8%) COPD. The percentage of active smokers was 20.2% (CI: 18.7–21.7%) and 27.0% (CI: 24.9–29.1%), p = NS, respectively. In general, asthmatic patients were associated to feminine gender (OR = 1.7) and in younger ages (15–44 years: 52.2%), $p < 0.001$; while COPD to masculine gender (women: OR = 0.2), older ages (65–74 years: 64.5%) and cardiovascular events (OR: 1.2). In both patients of high co-morbidity and with obesity (OR = 1.5 and OR = 1.4; in asthma and COPD respectively). The average of adjusted total cost/unitary was superior in COPD (€1,146.30) especially in pharmaceutical cost. **CONCLUSIONS:** The existence of active smoking patients in presence of asthma and COPD is high. In primary prevention should be established measures to carry out the reduction of cardiovascular risk factors (smoking and obesity), above all in subjects with COPD, were the resources consume and risks are higher.

PRS2

RELATIVE EFFECTIVENESS OF INHALED CORTICOSTEROIDS AND LEUKOTRIENE-RECEPTOR ANTAGONISTS TO PREVENT MODERATE-TO-SEVERE EXACERBATIONS AMONG ASTHMATIC CHILDREN

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OBJECTIVES: To investigate the relative effectiveness of inhaled cortcosteroids (ICS) and leukotriene-receptor anragonists to prevent moderat-to-severe exacerbations among asthmatic children. **METHODS:** From the linkage of two administrative health databases from Quebec, Canada, we reconstructed a cohort of asthmatic children aged 5 to 15 years that initiated a treatment with either ICS or LTRA between January first 1998 and August 31, 2005. Patients were followed between 4 and 12 months. The primary outcome was moderate-to-severe asthma exacerbations defined as an emergency department (ED) visit for asthma, a hospitalization for asthma or a dispensed short-course (≤14 days) prescription of oral corticosteroids. Patients' adherence to their controller therapy was estimated with the medication possession ratio (MPR). All analyses were stratified by the presence or not of an asthma exacerbation in the year before treatment initiation with ICS or LTRA. We estimated the adjusted rate ratios of moderate-to-severe asthma exacerbations comparing patients treated with ICS and LTRA with Poisson regression models including a dispersion parameter. The mean MPR was compared between ICS and LTRA users with a t-test. **RESULTS:** A total of 27,355 children were included in the cohort: 7,494 (27%) with and 19,861 (73%) without an exacerbation in the year prior to treatment initiation. Among children with no exacerbation before treatment initiation, the risk of exacerbations was significantly more than twice with ICS versus LTRA (adjusted RR = 2.3; 95% CI; 1.3–4.0), while the RR was not significant among children who had at least 1 exacerbation before treatment initiation (adjusted RR = 1.6; 95% CI: 0.8–3.1). The mean MPR was 0.16 for ICS compared to 0.35 for LTRA, among children with at least 1 exacerbation prior to treatment initiation ($p < 0.001$). These means were 0.15 and 0.30, respectively, among children with no previous exacerbation ($p < 0.001$). **CONCLUSIONS:** Among children free of exacerbations prior to treatment initiation, our study showed that ICS users were more than twice more likely to have an exacerbation than LTRA users and that higher adherence to LTRA may have accounted for this result.

PRS3

PREVALENCE OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE FROM ADMINISTRATIVE HEATH SERVICES DATABASES

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OBJECTIVES: To identify subjects affected by Chronic Obstructive Pulmonary Disease (COPD) in a local health authority of approximately 441 thousand inhabitants situated in Campania, a region in the southwest of Italy. **METHODS:** A retrospective naturalistic longitudinal study was conducted using record linkage between administrative health services databases (drug prescription, hospital admissions, demographic). We enrolled subjects with greater than or equal to 45 years old who had during the period 2006/2007 an hospital admission for Chronic Bronchitis (ICD-9 cod.491) and/or received drugs chronic prescription for obstructive diseases from the R03 Anatomical