OBJECTIVES: Chronic disease imparts significant disability, premature mortality and economic burden on countries. Chronic obstructive pulmonary disease (COPD) will be the fifth leading cause of disability-adjusted mortality in 2020. Causative exposures include tobacco smoke, biomass fuels, occupational and other environmental factors. The Burden of Obstructive Lung Disease (BOLD) project will estimate the prevalence and burden of COPD globally. Here, we on the design, development and application of a population simulation model to forecast country-specific economic burden of COPD. To show feasibility of the model, we report US burden data. **METHODS:** A publicly available population simulation model was developed to estimate annual and future mortality and costs. The model reflects changes in the size, composition and population demographics of the jurisdiction. Input data include disease prevalence from the BOLD COPD epidemiology studies, tobacco smoking and cessation rates, background mortality, disease attributable mortality, annual incidence of COPD, lung function progression data from the Framingham Heart Study and costs. Simulations are based on a starting cohort age 20 years and older in 2005. Five, 10 and 20-year projections are discounted at 3% per year. **RESULTS:** The model projects COPD prevalence to increase each year. In 2005, the projected cost of COPD in the US was $51.4 billion in medical expenses or $256 per capita. Cumulative discounted 5, 10 and 20 year medical costs for COPD were $304.9 billion, $678.4 billion and $1415.3 billion. **CONCLUSIONS:** COPD is one of the world's leading causes of disability and mortality. The economic consequences of tobacco use and occupational exposures leading to COPD are substantial. We developed this model as part of a global burden identification and reduction project. Here, we show its application for burden simulation with US data, but intend a larger global effort in conjunction with the BOLD project.

PRS13

COST ANALYSIS OF HEALTH CARE RESOURCE UTILIZATION DURING TREATMENT FOR RESPIRATORY TRACK INFECTIONS (RTIS) WITH TELITHROMYCIN OR CLARITHROMYCIN OR AMOXICILLIN/CLAVULANIC ACID IN GREECE

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OBJECTIVES: To compare direct medical costs related to the management of community acquired pneumonia (CAP) and acute exacerbations of chronic bronchitis (AECB) between telithromycin (TEL) and clarithromycin (CLA) or amoxicillin/clavulanic acid (AMC), in both public and private sector in Greece. **METHODS:** A health outcomes model was developed from three Phase III multinational clinical studies comparing TEL with CLA in CAP, and with AMC in AECB. In each study patients were followed for 36 days and the primary endpoint was clinical efficacy at post therapy visit. Health care resources included in the model were additional non-protocol antibiotics, hospitalizations, laboratory tests and outpatient health care professional visits. Two cost analyses were performed; one from the perspective of Greek Health care System by using public sector unit costs and one from private sector perspective in Greece (including both reimbursable costs and out of pocket costs) in an effort to present a more realistic case for Greece. **RESULTS:** From the Greek Health care System perspective, the use of TEL instead of CLA in CAP resulted in cost savings of up to €49 per patient and up to €20 per patient when compared with AMC in AECB. For the Greek private sector, TEL cost differences were even greater, up to €71 when administered for CAP instead of CLA and up to €28 in AECB instead of AMC. The cost savings resulted from TEL patients required fewer non-protocol additional health care resources (mainly a lower rate of hospitalization and shorter length of stay) than the patients in the comparator groups in both CAP and AECB. **CONCLUSION:** In Greece the use of telithromycin as a first line treatment option for CAP and AECB instead of clarithromycin or amoxicillin/clavulanic acid respectively, may significantly reduce health care costs in both public and private sector.

PRS14

HEALTH CARE RESOURCES UTILIZATION IN PATIENTS WITH CHRONIC OBSTRUCTIVE PULMONARY DISEASE ACCORDING TO THEIR SEVERITY IN SPAIN

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OBJECTIVE: Chronic obstructive pulmonary disease (COPD) accounts for about 10% of patient visits to a pneumologist, 7% of all hospital admissions, and 35% of permanent work disability. The aim of this study has been to assess health care resources utilization in Spain depending on the severity of the disease. **METHODS:** This analysis has been carried out through the design of a one-year retrospective naturalistic study performed through the whole Spanish territory, including both urban and rural areas. There have been included 9,045 COPD patients with a mean age of 67 ± 9.8 years. The severity of the disease was as follows: 33.8% mild (FEV1: 60–80% of predicted), 49.3% moderate (FEV1: 40–60% of predicted) and 16.8% severe (FEV1 < 40% of predicted). Health care resources collected were: added visits to the general practitioner (GP) and pneumologist, added visits to the emergency room, length of stay in the hospital and number of days off work. **RESULTS:** Severe COPD patients presented more added visits to the GP compared to moderate and mild COPD patients (5.83, 4.65 and 3.25 respectively, $p < 0.001$), likewise with regard to added visits to the pneumologist (1.55, 1.09 and 0.62 respectively, $p < 0.001$) and added visits to the emergency room (2.50, 1.62 and 0.9 respectively, $p < 0.001$). In addition, severe COPD patients showed a longer length of stay in the hospital than moderate and mild COPD patients (16.7 vs. 10.9 and 8.8 days respectively, $p < 0.001$) and less days off work (51.2, 29.4 and 18.9 respectively, $p < 0.01$). **CONCLUSIONS:** Severe COPD patients require higher health care resources utilization than moderate and mild patients. Therefore, it is necessary to elaborate programs and policies focused in diagnosing early COPD patients to try to avoid progression of mild patients to moderate and severe stages of the disease.

PRS15

OUTCOMES, RESOURCE CONSUMPTION AND COSTS OF INTENSIVE CARE PATIENTS HOSPITALIZED WITH ACUTE RESPIRATORY DISTRESS SYNDROME (ARDS) IN THE USA AND CANADA

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OBJECTIVES: To describe ARDS patients regarding survival, ventilation status, predisposing events, disease characteristics, length of hospital stay and duration of ventilation. **METHODS:** In a phase III clinical trial investigating treatment with Venticute (rSPC surfactant) compared to standard treatment in patients hospitalized for ARDS (NEJM 351, 884–892, 2004), patients were followed up for up to one year after randomization. This analysis is focused on the initial hospitalization and describes the pooled results from both treatment groups. Data were collected for 197 patients by means of a specific questionnaire covering