

expenditure and defined daily doses (DDD) per 1000 inhabitants/day. Drugs are examined according to the ATC (Anatomic Therapeutic Chemical) classification. The main indicator for hospital admissions is the number of admissions per 1000 inhabitants/year. Our preliminary analysis focused on respiratory drugs and hospital admissions for asthma and COPD in Modena districts. **RESULTS:** In year 2000, overall and per person expenditure for respiratory drugs were €6.614.098 (7.5% of total expenditure) and €10.6, respectively. We observed variability in drug prescription among districts: extreme values were reported for districts of Mirandola, 44.1 DDD per 1000 inhabitants/day, and Carpi, 35.3. Asthma and BPCO admission rates showed a broad variability as well: 3.2 and 3.3 admissions per 1000 inhabitants/year for Carpi and Mirandola, respectively, and 8.4 for Pavullo. Our analysis showed no correlation between drug prescription and hospital admission: districts with similar admission rates (Mirandola and Carpi) reported quite different values in drug prescription. **CONCLUSIONS:** These preliminary findings are the starting point for more specific analyses that will explore possible determinants of the observed variability in order to increase appropriate use of drugs.

RESPIRATORY DISORDERS—Cost Studies

PRP16

COST-EFFECTIVENESS OF BUPROPION SR IN THE TREATMENT OF TOBACCO DEPENDENCE

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Objective: The objective of this analysis is cost-effectiveness comparison of bupropion SR in the treatment of tobacco dependence versus: placebo, nicotine replacement therapy (NRT), bupropion SR used in combination with NRT (BUPR+NRT). **METHODS:** The efficacy analysis was carried in accordance with guidelines for systematic review basing on credibility criteria of the Cochrane Collaboration—Cochrane Reviewers' Handbook and Evidence Based Medicine. Cost analysis included direct costs from payer's extended perspective (public resources and the patient), collected in Poland. Sensitivity analysis was performed, with consideration of the variable costs of NRT. **RESULTS:** The results of meta-analyses showed a statistically significant increase of successful attempts of tobacco cessation with the use of bupropion versus placebo by 10.7% per year (ARR). Bupropion also shows a statistically significant superiority in relation to NRT. The odds ratio of one year-long abstinence with the use of bupropion versus NRT is 2.0 [CI 95% (1.2–3.4)]. The economic analysis has shown that the most cost-effective is bupropion used in combination with medical advice. The cost of maintaining absti-

nence for the lifetime as a result of the use of bupropion in combination with medical advice, calculated for one patient, is €2,948,70; cost for LYG is €1,474,35; cost for QALY is €1,092,23 (2002 average exchange rate: €1 = 3,86 PLN). The least favourable is NRT. The technology being the combination of NRT and bupropion has intermediate cost-effectiveness results. The cost of medical advice has not been considered in the analysis. **CONCLUSIONS:** It may be stated that bupropion is a medicinal product statistically significantly more effective versus placebo and NRT in the treatment of nicotine dependence. Bupropion is a cost-effective technology, where the cost for LYG is significantly lower than the cost-effectiveness threshold (€10,362,69/dialysotherapy/patient per year).

PRP17

ESTIMATING HOSPITAL BURDEN DUE TO PNEUMONIA, ASPIRATION, AND ACUTE LUNG FAILURE: DATA FROM THE NATIONAL HOSPITAL DISCHARGE SURVEY (NHDS)

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OBJECTIVE: Acute lung failure (ALF), often resulting from pneumonia and/or aspiration, is associated with high mortality. The objective of this study was to estimate the resource burden of ALF events by characterizing pneumonia-associated ALF using NHDS 2000 data. It was hypothesized that using ALF diagnosis codes alone may not capture all events; ventilation may be an important indicator. **METHODS:** A base population was used using pre-defined diagnosis codes for pneumonia and aspiration. It was stratified using various combinations of diagnostic and procedure groupings: pneumonia, aspiration, or both; ALF; intubation and ventilation use; discharge status; and age. Weighting allowed for extrapolation to the U.S. civilian population. **RESULTS:** Of the estimated 35,348,186 U.S. hospital discharges in 2000, 2,388,996 (6.8%) were associated with pneumonia and/or aspiration. Of these, 192,975 (8.1%) required ventilation, with approximately 82,840 (43%) of them requiring ventilation for ≥96 hours. Comparatively, 278,678 (11.7%) of pneumonia and/or aspiration discharges were coded as ALF; approximately 64,194 (23%) of them required ventilation for ≥96 hours. Note that overlap exists among these 2 subgroups (38.9% with both ventilation and ALF), but was not extensive as hypothesized. Of pneumonia and/or aspiration discharges with ventilation for ≥96 hours, median length of stay (LOS) was 19 days when discharged alive and 15 days when discharged dead (overall median = 18 days). Of pneumonia and/or aspiration discharges with ventilation for <96 hours, median LOS was 8 days when discharged alive and 4 days when discharged dead (overall median = 7 days). **CONCLUSIONS:** The NHDS is a useful resource for estimating the economic burden of ALF during hos-

pitalization. However, subpopulations must be clearly specified to avoid erroneous estimates. Ventilation use among subgroups varies depending on diagnoses and procedures specified. Since length of ventilation appears related to overall LOS and resource demands, estimations of cost burden will vary by subgroup definition for ALF.

RESPIRATORY DISORDERS—Quality of Life Studies

PRP18

ANALYSIS OF LONGITUDINAL CHANGES IN QUALITY OF LIFE BEFORE AND AFTER LUNG TRANSPLANTATION USING A MULTI-LEVEL MODEL

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OBJECTIVES: Health Related Quality of Life (HRQL) following lung transplantation (LGTX) becomes more important with increased life expectancy. Analyses are often hampered by a relatively large number of patients who drop out, due to their condition or death. This problem of missing values is of real importance, and cannot be neglected. In the present study the change in HRQL before and after LGTX was analysed as a function of several predictors, assuming that the probability of missing only depended on the observed measurements (Missing at Random). **METHODS:** Between 1992 and 2002, 415 patients completed one or more self-administered HRQL questionnaires before and up to 63 months after LGTX. The questionnaires were sent by mail on a regular basis. In this study we focus on one dimension of the energy Nottingham Health Profile. A multi-level model was used to analyse the changes in this dimension as a function of several predictors. Since multi-level structures do not require balanced data to obtain efficient estimates, all patients who completed at least one questionnaire were taken into account. **RESULTS:** The dimension energy of the NHP improved significantly after LGTX. This remained more or less constant up to 63 months after LGTX. The predictors “age” and “the presence of Bronchiolitis Obliterans Syndrome (BOS)” appeared to have a significant influence. For pre- and post-transplantation patients, the scores on the dimension energy increased with age. This means that older patients have more restrictions regarding energy than younger patients. After the onset of BOS, patients experienced significantly more restrictions in the NHP energy measure. **CONCLUSION:** There are considerable improvements regarding the NHP dimension energy after lung transplantation. Age and BOS are highly significant predictors. The improvements are maintained during long-term follow-up.

SKIN DISORDERS/DISEASES

SKIN DISORDERS—Clinical Outcomes Studies

PSN1

DERMATOLOGICAL DISEASES AND PODIATRIC DISORDERS IN THE FEET OF THE ELDERLY POPULATION: A DESCRIPTIVE STUDY

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OBJECTIVES: Feet disorders among the older population have a significant effect on individual quality of life, especially on walking ability, and therefore on the cost of health care. The objective was to design a Spanish national campaign, with the participation of dermatologists and podiatrists in order to estimate the prevalence of feet disorders among the elderly population. **METHODS:** The campaign was addressed to users of the Instituto de Migraciones y Servicios Sociales (IMERSO) thermal programme aged over-60 was designed. In each spa, a team made up of a dermatologist and a podiatrist assessed the feet of the volunteers. The campaign lasted for one month, during the weekends. A questionnaire to collect dermatological and podiatric clinical data was designed and was previously approved by all investigators as well as the procedural methods during the feet examination in a consensus meeting. **RESULTS:** Data was collected from 4065 volunteers, and 3925 were analysed. Advertising posters in the spas and campaign information in the welcome letters induced the user participation. From the users revised 2893 (72.8%) were women (mean age 71.4; SD: 5.8). Seventy-eight percent showed dermatological pathology and 90.7% podiatric disorders. The most common dermatological diseases were ungueal dystrophy (35.1%), Tinea Pedis: 23.1% and onychomycosis: 20.8%. The most common podiatric disorders were hyperkeratosis (58.1%), hallux valgus (43.8%) and claw toes (28.9%). More than 70% suffered concomitant dermatological and podiatric pathologies and only 2.9% had a normal foot ($p < 0.01$). **CONCLUSIONS:** Some detected feet disorders, such as mycotic infections, should be approached through an effective treatment and preventive measures. Our results suggest the need for greater sensitivity towards feet pathology in the clinical practice with elderly people. Multidisciplinary studies design in some populations, mainly in the elderly, are desirable to define combined and specific interventions.