most important cost drivers in COPD. The purpose of this analysis was to assess the cost-effectiveness of tiotropium, a once daily inhaled anticholinergic. METHODS: A cost-effectiveness analysis has been performed, defining effectiveness as each exacerbation avoided. Effectiveness data of tiotropium and comparator have been obtained from a one-year clinical trial comparing tiotropium plus standard treatment (short-acting beta-adrenergic and/or inhaled/oral corticoids) with placebo plus standard treatment (defined as above), which showed that the group receiving tiotropium had less exacerbations per year (1.57 vs. 2.41; p < 0.01) Health care resources utilization has been taken from the same clinical trial, a systematic review of the literature, and a local expert panel. The analysis has only included direct medical costs from the perspective of the Spanish National Health System. Drug costs were taken from an official source and other costs from a Spanish health care cost database, both dated 2005. The time horizon selected was one year, the follow-up period of the aforementioned clinical trial. RESULTS: Total costs per patient in the tiotropium group was €1388 and in the placebo group €1119. Hospitalisation costs accounted for 44% and 84% in the tiotropium and placebo group, respectively. The incremental cost-effectiveness ratio was €320 to prevent one exacerbation in a COPD patient when using tiotropium instead of placebo. CONCLUSIONS: The use of tiotropium in addition to the standard treatment as defined in the clinical trial from which effectiveness data were derived is a cost-effective measure in the management of patients with COPD in Spain. 1MISTRAL study—Eur Resp J 2004;24(Suppl. 48):S513.

ECONOMIC EVALUATION OF TIOTROPIUM AND SALMETEROL IN THE TREATMENT OF COPD IN GREECE

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OBJECTIVE: To estimate the cost-effectiveness of Tiotropium compared with Salmeterol in Greece from the perspective of National Health System. METHODS: A Markov model was structured around disease states and exacerbations based on patient-level data derived from clinical trials comparing tiotropium (18μg qd) with Salmeterol (50μg bid) [1]. At the start of the model simulation, 20% of the patients were assumed to have moderate COPD, 50% severe and 30% very severe COPD according to the international GOLD classification. During each Markov cycle patients had a certain probability to experience a severe or non-severe exacerbation. An exacerbation was clinically defined as a complex of respiratory symptoms. Costs of exacerbations were divided into hospitalization and other costs. Total costs comprise of the costs for exacerbations and maintenance therapy. All costs are expressed in 2004 Euro. The time horizon of the analysis was one year. RESULTS: The mean number of exacerbations per patient in one year was 0.92 in the tiotropium arm, and 1.1 in the salmeterol arm, resulting in 0.18 exacerbations avoided per patient and year when using tiotropium instead of salmeterol. The total costs per patient in one year were €1,324 in the tiotropium arm, and €1,239 in the salmeterol arm, resulting in a cost difference of €85. The higher acquisition costs for tiotropium were almost offset by savings in hospitalisation costs. The incremental cost per exacerbation avoided was €472. CONCLUSION: Tiotropium appears to be a cost-effective treatment for the Greek health care system with acceptable costs per exacerbation avoided. [1] Oostenbrink J, Rutten-van Molken M, Monz B, FitzGerald J. Probabilistic Markov model to assess the cost-effectiveness of bronchodilator therapy in COPD patients in different countries. Value Health 2005;8:32–46.

COST-EFFECTIVENESS OF FENSPIRIDE IN ADULTS WITH CHRONIC BRONCHITIS EXACERBATIONS IN POLAND

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OBJECTIVES: To evaluate short term cost-effectiveness of fenspiride therapy in patients with chronic bronchitis exacerbations in Poland. METHODS: A cost-effectiveness analysis was performed based on the results of a randomized controlled clinical trial comparing fenspiride and placebo in the concomitant treatment of chronic bronchitis. The study population (n = 183 age 57 ± 9) was treated with fenspiride 80mg or placebo twice daily for 6 months. The number and duration of acute exacerbations of chronic bronchitis (AECB) defined according to the American Thoracic Society were the main efficacy criteria. Cost analysis was performed from the societal perspective. Costs of medical consultations and diagnostic tests were based on the Polish National Health Fund rates index. Indirect costs were calculated using human capital approach. RESULTS: Number and duration (days) of AECEB over 6 months were lower in the fenspiride group compared to the placebo group, on average 0.56 vs. 1.0 and 3.21 vs. 6.54, respectively. The number needed to treat (NNT) to avoid an AECEB episode was 2.27 over 6 months. In the population of patients with exacerbations, 32% of fenspiride group and 60.5% of placebo group experienced more than one AECEB episode. In this population the NNT to avoid an AECEB episode was 1.85 over 6 months. Taking only direct costs into consideration, the incremental cost-effectiveness ratio of fenspiride was €19.61 for one AECEB episode. Indirect costs equaled €43.79 per patient per one day of AECEB. In the fenspiride group indirect costs constituted 61% and in the placebo group 82% of the total costs. Including direct and indirect costs, fenspiride concomitant treatment is a cost-saving alternative. CONCLUSION: In Poland, concomitant treatment of chronic bronchitis with fenspiride is a cost-effective alternative in patients who experienced AECEB.

COST-EFFECTIVENESS OF FLUTICASONE PROPIONATE NASAL DROPS VERSUS SURGICAL TREATMENT FOR NASAL POLYPOSIS IN POLAND

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OBJECTIVES: To compare early polipectomy based strategy with initial treatment with fluticasone propionate nasal drops (FPND) for the treatment of bilateral nasal polyposis in adults in Poland. METHODS: A decision analytic model was developed to reflect current clinical practice in management of bilateral nasal polyposis in Poland. Early polypectomy, preceded by computed tomography and followed by FPND for four months was compared with initial treatment with FPND. In case of treatment failure of the drug based strategy, patients were treated with systemic corticosteroids and thereafter polypectomy. Data on treatment methods efficacy were derived from literature review. Cost analysis was performed from payer perspective. Sensitivity analysis focused on surgical treatment costs and FPND efficacy.
RESULTS: The strategy based on initial treatment with flutica-
zone propionate nasal drops resulted with treatment cost of PLN 768, while early polypectomy resulted with cost of PLN 1251. When surgery was performed in outpatients’ settings the mean treatment costs were PLN 586 for initial fluticasone and PLN 751 for early polypectomy. Sensitivity analysis revealed that FPND is less costly therapy unless no computed tomography is performed prior to polypectomy and the cost of surgical procedure falls below PLN 170. CONCLUSIONS: Treatment strategy based on fluticasone propionate nasal drops is effective in bilateral nasal polypsis and results in short-term cost savings.

**COST OF COMMUNITY ACQUIRED PNEUMONIA (CAP) TREATMENT WITH KETEK (TELITHROMYCIN) VS CLARITHROMYCIN FROM PUBLIC PAYER PERSPECTIVE IN POLAND**

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OBJECTIVES: To assess the clinical effectiveness and economic consequences of telithromycin or clarithromycin in CAP treat-
tment from public payer perspective in Poland. METHODS: Results of a systematic review of published clinical trials selected in accordance with EBM criteria were used to assess effective-
ness and safety of the antibiotics in CAP treatment. The eco-
nomic consequences for public payer for therapy of individual patient in case of clarithromycin replacement by Ketek (telithromycin) were calculated. In this analysis it was assumed that only pharmacotherapy costs and CAP hospitalization costs differed; other costs were assumed to be the same irrelevant to the antibiotic used. An assumption was made that level of phar-
camotherapy reimbursement in case of treatment with both telithromycin and clarithromycin would be the same, public payer costs for DDD were calculated. Costs of CAP hospitaliza-
tion varied on number of admissions during 1 month of follow-up period. RESULTS: Clinical effects of the two drugs were similar and no significant differences in effectiveness or safety were found in pooled data from two randomized clinical trials. Telithromycin treatment was associated with significantly fewer CAP-related hospitalizations compared with clarithromycin (1.6% vs 3.6% patients admitted, respectively). CAP-related hospitalization costs per patient were much lower for telithromycin treatment compared with clarithromycin (35.5 pln (8.45E) vs. 79.2 pln (18.8E) respectively). Taking into account reimbursement of pharmacotherapy and costs of hospitalization, public payer savings when using telithromycin in place of clarithromycin could be as high as 33 pln(7.8E) – 50pln(12E)/patient (based on sensitivity analysis). This lead to high annual savings for public payer. CONCLUSIONS: Ketek (telithromycin) in place of clar-
ithromycin lead to significant savings for public payer in CAP
treatment in Poland.

**PROJECTING THE FUTURE COSTS OF ASThma AND COPD IN THE NETHERLANDS**

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OBJECTIVE: This study aimed to project future costs of asthma and chronic obstructive pulmonary disease (COPD) in The Netherlands for the period 2000–2025. METHODS: Gender-, age- and (for COPD) disease-stage specific data on direct, medical costs per patient were obtained from a cost of illness study for the year 2000. Cost projections over the period 2000–2025 were based on two types of projections of the preva-
ience of asthma and COPD. Both prevalence projections were combined with two types of cost projections; first assuming con-
stant costs per patient and second adding asthma and COPD-
specific trends in costs for hospital care (asthma, –4.7% and COPD, –4.1% per year) and medication (+4.9% per year) and general trends in remaining cost categories. RESULTS: In 2000 the annual costs per asthma patient were €315, compared to €915 for a COPD patient. Assuming constant costs per patient, costs were projected to increase from €141 million in 2000 to amounts between 167 and €181 million for asthma and from 280 to €443–495 million for COPD. Severity stage specific COPD costs increased from 22.6 to 51.2 for mild COPD, from 104 to 148 for moderate, from 99.0 to 140 for severe and from 54.5 to €156 million for very severe COPD. Including trends costs categories resulted in estimates between 460 and 497 for asthma and 1023 and €1130 million for COPD. CONCLU-
SIONS: Projections of future costs show that the absolute and relative increase in costs over the period 2000–2025 is higher for COPD than for asthma.

**MANAGEMENT OF COPD IN BELGIUM: A REAL LIFE COST OF ILLNESS STUDY**

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OBJECTIVES: To assess the cost of managing COPD (health care payers perspective) in a real life setting in Belgium. METHODS: A multi-centre observational study with data-
collection in a retrospective way (one-year) was performed. A total of 38GPs and 15 pneumologists participated. Patients con-
sulting the physicians in Q4 2004–Q1 2005 were eligible. Indi-
vidual data-collection sheets per patient, evaluating the yearly medical resource use, were completed by each investigator. Diag-
nostic methods, COPD severity, as well as smoking habits were evaluated. RESULTS: A total of 460 patients were evaluated. Mean age was 66 years, males represented 68.70%. 40.43% of patients were smokers (average n pack-years 36.69, StErr 1.54), 50.22% ex-smokers. COPD diagnosis was made in about half of the patients by both clinical evaluation and spirometry. A total of 13% of the patients had mild COPD, 47% moderate, 30% severe and 10% very severe COPD according to clinical evalua-
tion or spirometry (GOLD-guidelines). A total of 73% of the patients experienced at least 1 exacerbation during the 1-year-
study-period. Yearly number of exacerbations ranged between 0 and 12 (average n: 1.37, median: 1.00). In most cases (69.64%), no hospitalisation was needed. If hospitalized, average hospital stay per exacerbation was 13.30 days (StErr 1.03). Yearly COPD-maintenance-treatment cost ranged between 390€ (mild) to €1117 (very severe COPD). Maintenance-treatment included a wide range of medications. Management of COPD resulted in a total yearly cost of €1810 (StErr 139.55, range €537 (mild COPD)–€5888 (very severe COPD)), including maintenance-
treatment (€670, StErr 26.67, hospitalisation (€1073, StErr 130.16) and treatment of exacerbations (€67, StErr 6.78). CONCLU-
SIONS: Management of COPD is costly, mainly due to the cost of hospitalisations. For very severe COPD patients, yearly management costs increase up to almost €6000.