BUDGET IMPACT ANALYSIS OF MIMPARA AMONG DIALYSIS PATIENTS IN BELGIUM USING A MARKOV SIMULATION MODEL
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OBJECTIVE: To demonstrate the impact of Mimpara (MIM), a drug against secondary hyperparathyroidism (sHPT), on the dialysis health care budget in Belgium over time. METHODS: A Markov model was developed to compare cost of dialysis patients on standard treatment of care (SOC) with patients on MIM + SOC (add-on model). The model operates in 1/2 year cycles over 5 years starting with a cohort of 5,400 patients (prevalence data). Each year new cases were added to the cohort and a % dropped out due to death or renal transplant. Mortality risk was calculated from 2-year cohort dialysis database (CDB) (n = 13,000). Patient distributions for sHPT, calcium x phosphor values, and MIM dosages were taken from phase III trials for the MIM arm and from the 2-year CDB for the SOC arm. Patients withdrawing from MIM were treated as SOC patients. According to CDB 35% of the initial cohort may receive MIM (= % of sHPT). Drug uptake was 30% in first cycle with 20% increase per added cycle. MIM drug costs were €3109/year in first cycle and €2617/year per added cycle as only drug responders (85%) remained on study drug. Other treatment costs were taken from a retrospective cost study in Belgium using average daily cost of €214 per dialysis patient, plus €50/day for sHPT. Annual 3% discount rate was applied. RESULTS: Cumulative 5-year cost difference of €7.4 million was seen between SOC- and MIM-arm (<0.4% total cost increase with MIM). Running the analysis per year, cost savings early in MIM-treatment were observed due to reduction in treatment costs of morbidities related to shift from sHPT. Slight increase in treatment costs was seen later on due to observed survival benefit with MIM. CONCLUSION: Major budget shifts will not be seen with Mimpara in its approved indication.
ECONOMIC IMPACT OF EXTENDED-RELEASE TOLTERODINE VERSUS IMMEDIATE- AND EXTENDED-RELEASE OXYBUTYNIN AMONG COMMERCIALALLY-INSURED PERSONS WITH OVERACTIVE BLADDER

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OBJECTIVES: To examine the economic impact of extended-release tolterodine (TOL-ER) versus immediate-release tolterodine (TOL-IR) or oxybutynin immediate release (OIR) in patients with overactive bladder (OAB). METHODS: This retrospective cohort study used the PharMetrics Patient-Centric Database to identify patients diagnosed with OAB who newly started therapy with TOL-ER, OXY-IR, or OXY-ER between January 2001 and December 2002. 12-month pretreatment and follow-up periods were established from the first prescription date. TOL-ER patients were matched to OXY-IR and OXY-ER patients based on an estimated propensity score for TOL-ER therapy (i.e., probability of TOL-ER use based on multiple logistic regression). Use of OAB pharmaceuticals and related mediations; use of outpatients and inpatient services related to OAB, infection, depression, and other conditions; and all corresponding costs were compiled for 1 year. Costs were compared using Wilcoxon rank-sum tests, and total health care costs were validated in a multivariate context using a generalized linear model. RESULTS: A total of 7257 TOL-ER/OXY-ER (80% female) and 5936 TOL-ER/OXY-IR (72% female) matched pairs were created (mean age, 54 y). Because of matching, demographic and clinical characteristics between cohorts were not significantly different. Costs for services related to OAB, infection, and depression were significantly lower for TOL-ER vs. OXY-ER. Total health care costs were also significantly reduced for TOL-ER (mean [SD], $8,303 [$18,802]) vs. OXY-ER ($8,862 [$18,864], p = 0.0109). Medication costs were significantly higher for TOL-ER ($2,791 [$4997]) than for OXY-IR ($2,204 [$3,944], p < 0.0001). However, this increase was offset by reductions in expenses related to conditions including infection and depression. Total costs did not differ significantly between TOL-ER and OXY-IR. After adjustment for between-group differences, costs were significantly reduced for TOL-ER patients versus OXY-ER and OXY-IR (p < 0.01). CONCLUSION: Patients with OAB initiating therapy with TOL-ER incurred lower annual health care costs, including nonpharmacologic costs related to OAB, infection, and depression compared with those receiving OXY-IR or OXY-ER.

DELIVERING TREATMENT EFFECTIVENESS: COSTS AND PERSISTENCE OF TOLTERODINE IN THE MANAGEMENT OF OAB IN FIVE EUROPEAN COUNTRIES

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OBJECTIVES: Overactive bladder (OAB) is associated with both an economic and quality of life burden. Current management involves antimuscarinic agents. Extended release formulations are expected to improve treatment compliance and persistence. This study explored persistence and impact on OAB related co-morbidities with two therapies: tolterodine extended release (TER) and oxybutynin immediate release (OIR) compared to no active drug treatment (NONE) and associated costs across five European countries. METHODS: A decision-analytic model estimated costs and outcomes associated with treatment. A large case-controlled study was used to estimate the percentage of patients achieving persistent control, defined as patients still on therapy after six months. Resource use included drug costs, physician visits, incontinence pads and the cost of urinary tract and skin infections. The model estimated the cost per patient achieving persistent control of OAB. Costs were estimated from the perspective of health service payers over six months. Sensitivity analyses included variation of the resource use frequency assumptions, cost inputs, and the time horizon of the analysis. RESULTS: After six months, the proportion of patients achieving persistent control was 39% on TER and 9% on OIR. Costs per patient for TER ranged between €349 (Germany) and €772 (Sweden) and between €177 (Germany) and €693 (Sweden) for OIR. Compared against NONE, the Incremental Cost-Effectiveness Ratios (ICERs) for TER were much lower than for OIR. ICERs of TER vs. OIR ranged between €351 (Sweden) and €822 (Spain). Sensitivity analysis highlighted the model’s sensitivity to the time horizon, physician costs and persistency rates. Differences in costs largely reflect variation in the proportion of patients in each country using incontinence pads. CONCLUSION: In this model more than twice as many patients achieve persistent control with TER than with OIR. The model estimated the cost per patient achieving persistent control would be lower with TER than with OIR.

COST-EFFECTIVENESS OF SCREENING FOR ALBUMINURIA AND SUBSEQUENT TREATMENT WITH AN ACE-INHIBITOR; A PHARMACO-ECONOMIC ANALYSIS

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OBJECTIVES: Studies showed secondary prevention of cardiovascular (CV) events to be cost-effective, but only few reports proved cost-effectiveness in primary prevention, in particular with respect to nephrologic markers such as urinary albumin excretion (UAE). Our objective was to conduct cost-effectiveness analysis of screening for albuminuria in general population and subsequent ACE-inhibitor treatment to prevent CV-events. METHODS: Data is derived from the PREVEND-IT (Prevention Renal and Vascular ENdstage Disease Intervention Trial) and the PREVEND observational-cohort study. The PREVEND-IT was a randomised placebo-controlled trial to assess the effects of fosinopril 20 mg on CV-events in 864 subjects with UAE 15–300 mg/24 hr, blood pressure <160/100 mmHg and plasma cholesterol <8.0 mmol/L. Evaluation of treatment was based on the PREVEND-IT; the screening part was primarily based on the observational data (PREVEND) gathered among trial participants and beyond. Cost-effectiveness was estimated for the Dutch population. Cost-effectiveness was expressed in net costs per life-year gained (LYG) with a 4% discounting rate and (stochastic) sensitivity analysis. Bootstrapping analysis was used to derive 95% CI for the cost-effectiveness ratio (CER) and threshold probabilities. RESULTS: Patients treated with fosinopril