PCV64 THE POTENTIAL CLINICAL AND ECONOMIC OUTCOMES OF PHARMACOGENETIC-ORIENTED WARFARIN THERAPY IN RUSSIA Gerasimova KV
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OBJECTIVES: To evaluate the potential clinical and economic outcomes of using genotype data to guide the management of warfarin anticoagulation therapy. METHODS: A decision tree was designed to simulate two groups – group of standard therapy (g3T) and group of pharmacogenetic-oriented (g3PG) therapy. Both groups were simulated by genotype: patients with alleles CYP2C9*2 and CYP2C9*3 and patients with genotype CYP2C9*1. CYP2C9*1 patients were subdivided further into VKORCC1 and VKORCC1A/8 types. Outcomes in each group were: major bleeding (gastrointestinal and intracranial minor bleeding) and overall mortality (heart failure, arrhythmia, hemoptilomas and others) and no bleeding. Direct medical costs from the Russian healthcare system point of view were estimated. Rate of bleedings in patients with different genotypes and relative risks of bleedings in pharmacogenetic-oriented approach were obtained from the literature. Sensitivity analysis to key parameters was performed. RESULTS: In the basic scenario costs of the standard treatment were higher than in pharmacogenetics-oriented group: 8454 rubles (USD305) and 6806 rubles (USD243) for 1 patient per year respectively. Sensitivity analysis showed that the model is sensitive to the price of pharmacogenetic test only: the pharmacogenetics-oriented approach would be more cost-effective if the costs less than 10% (USD93). CONCLUSIONS: In the Russian health care system, pharmacogenetic-oriented warfarin therapy is cost saving if the price of pharmacogenetic test does not exceed 2600 rubles (USD93).

PCV65 CLINICO-ECONOMIC EVALUATION OF COMPLEX CARDIOVASCULAR THERAPY WITH MAGNESIUM OROTATE IN PATIENTS WITH CHRONIC HEART FAILURE VERSUS STANDARD THERAPY IN UKRAINE Takivleva L, Kyrychenko O, Mishchenko O
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OBJECTIVES: To evaluate the profitability of the complex cardiovascular therapy with magnesium orotate in patients with chronic heart failure (CHF) IV functional class (NYHA IV). METHODS: Cost-effectiveness evaluation of 2 treatment strategies was performed using the modeling decision tree. Data from various sources: the results of two clinical trials (Stepruna O.B., Martynova A.I., 2009; Libs R.A. et al, 1966) and National standard of treatment of patients with CHF IV class were used in the modeling. Cost-effectiveness ratio was calculated in accordance with the threshold willingness to pay for improving health achievement. The analysis of the impact of the implemented treatment strategies on the budget, taking into account the lost productivity was conducted. RESULTS: The inclusion of magnesium orotate in the CHF standard therapy improves the health (QALY) 1/0, 24, 4), it gives an additional 0,14 QALYs and requires additional costs. Only direct medical costs were included in the cost value. Incremental cost-effectiveness ratio was 1517,82 $ / add. QALY. It is less than GDP per capita (current threshold willingness to pay), i.e. cardiovascular therapy with magnesium orotate is cost effective. However, taking into account the financial capacity of the health system in Ukraine, in real practice such costs for achieve better health are less acceptable than the costs of standard therapy. Indirect costs (lost productivity) during 2 years in the application of standard therapy with magnesium orotate were less than indirect costs in application only standard therapy. Saving money - 606,7 $ per patient. CONCLUSIONS: Thus the inclusion of magnesium orotate in the standard therapy in patients with CHF is cost effective. High direct costs were compensated due to indirect cost savings.

PCV67 HEALTH-ECONOMIC IMPACT OF THE HUNGARIAN SALT INTAKE REDUCTION PROGRAM Nagyvayni L1, Martos E2, Bódószty D3, Voky Z2
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OBJECTIVES: Salt consumption in Hungary is high in international comparison, the average salt intake is 17.8g per day in men and 12.6g in women. Our aim was to study the potential clinical and economic impact of the salt intake reduction program run by the Hungarian National Institute for Food and Nutrition Science. METHODS: We built a cohort simulation Markov-model. The health benefit achieved by reduced salt intake was calculated for the 40-60 year old Hungarian population in 7 health states: healthy, hypertension, pre- and post AMI, and stroke. The transitional probabilities were calculated from national and international publications. We used the data of National Health Found and expert estimations to define the costs of interventions and health states. The efficacy was modeled with the use of data from the literature. It was assumed that 3g salt reduction results in 10mg decline in systolic blood pressure (SBP) and 10mg SBP lowering will reduce the prevalence of the hypertension with 1%. A discount rate of 5% was applied. RESULTS: If a public health program could reduce the salt intake to 10g/day/capita in 5 years by 31% the prevented cases of AMI and stroke will be: AMI 22,700, and stroke 12,000. I.e. the ICER would be 4900 5 USD PPP (1USD PPP = 128.92 HUF). In this scenario the lifelong risk of AMI and stroke would decrease with 0.0034 the incremental cost of the intervention is 27.15 USD PPP, and the QALY win is 0.0066. CONCLUSIONS: An effective public health program to reduce salt intake would be cost-effective in Hungary.

PCV68 PHARMACOGENOMIC TESTING FOR WARFARIN USE IN TYPICAL OUTPATIENT SETTINGS LOWERS HEALTH CARE COSTS: THE MEDCO-MAYO WARFARIN EFFECTIVENESS STUDY Aubert RB1, Epstein RS2, Yao J3, O’Kane DJ3, Tinnirello J3, Teagarden JR3, Moyer TP2
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OBJECTIVES: To measure the comparative direct medical care costs between incident warfarin patients who did or did not experience genotyping to guide dosing. METHODS: We reanalyzed the previously published MM-WEIS in which we demonstrated the genotyping reduces the risk of hospitalization and thromboembolism in patients who initiate warfarin treatment in typical outpatient practice settings. We used a cost analysis consequence to estimate the 6-month costs and consequences of warfarin genotyping. The intervention group (IG) comprised 896 patients and a comparison group was constructed from 2688 historical controls (HC). The direct and indirect care costs were estimated for incident patients, office visits and laboratory utilization (including cost of genotyping) and summed to a total cost per patient. A boot-strapping method was performed to estimate confidence limits around the difference in mean cost per patient to assess statistical significance. RESULTS: Over the 6-month monitoring period, the all cause-related per patient costs for the genotyped IG patient was $4127 compared to $5040 for HC. The all cause difference of $913 per patient reached statistical significance, 95% CI ($895, $930). Various subgroup analyses including warfarin-related costs will be presented. CONCLUSIONS: Our analysis suggests that providing results of warfarin genotyping to treating physicians in typical outpatient settings produces cost-savings within six months of initiating warfarin therapy. These estimates are likely conservative as they do not include ancillary costs such as rehabilitation or indirect costs, nor do they estimate costs beyond six months.

PCV69 ECONOMIC EVALUATION OF PRIMARY PREVENTION OF CARDIOVASCULAR DISEASES IN MILD HYPERTENSION: A SCENARIO ANALYSIS FOR THE NETHERLANDS Stevanovic F1, O’Prinnze PS2, Postma M3, Feuhlingvlagh P3
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OBJECTIVES: According to current Dutch guidelines, antihypertensive treatment for patients with mild hypertension is recommended if the 10-year fatal cardiovascular disease (CVD) risk exceeds 10% or if accompanying risk factors are present. Recent studies suggest that reducing the 10-year CVD risk estimates might be more informative than 10-year risk estimates. The aim of this study was to estimate the economic impact and influence on CVD risk of blood pressure (BP) reduction, in patients ineligible for treatment according to guidelines. METHODS: A Markov model was developed to assess the lifetime costs and health benefits of BP reduction with hydrochlorothiazide (HCT) or HCT plus losartan. Patients had mild hypertension and 10-year CVD risk. The SCORE risk estimates were modified to predict fatal and non-fatal events over a lifelong time horizon. We analysed scenarios for different age groups, gender and reductions in BP. Costs and health effects were discounted at 4.0% and 1.5%, respectively, a Dutch healthcare perspective was used. RESULTS: A total of 48 different scenarios were modeled. Minor BP reductions were potentially not cost-effective in young women treated with HCT ($59,000 per life-year gained (LYG)), whereas potential cost-effectiveness was observed in a comparable male population ($12,000 per LYG). BP reduction was, generally, found to be more cost-effective in men, in older subjects and for larger BP reductions (up to cost-saving results). Results for HCT plus losartan were comparable. CONCLUSIONS: In patients ineligible for antihypertensive treatment according to current guidelines, reducing blood pressure might be cost-saving for several patient populations. BP reduction was found to be potentially cost-effective in males for all age groups and even cost-saving in older ages, whereas for females it was less favorable. Thus, together with recent decreases in drug prices, should trigger further discussion on antihypertensive treatment in patients with low-10-year CVD risk.

PCV70 COST EFFECTIVENESS OF TICAGRELOR IN THE TREATMENT OF ACUTE CORONARY SYNDROME IN GERMANY Theidel U1, Asselburg C2, Giannitsis E3, Katus H2
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OBJECTIVES: The PLATO trial showed that in patients with acute coronary syndromes (ACS) treatment with ticagrelor plus acetylsalicylic acid (ASA) compared with clopidogrel/ASA significantly reduced the rate of myocardial infarction (MI), stroke, or death from vascular causes without a significant increase in the rate of overall major bleedings. The present study evaluates the long-term cost-effectiveness of treating patients with ticagrelor in Germany from the perspective of the Statutory Health Insurance (SHI) (with/without warfarin). A two-part decision tree approach for the first year followed by a long-term Markov model, was constructed to estimate lifetime costs and life year gained (LYG) of treating ACS patients for one year with ticagrelor/ASA compared with clopidogrel/ASA. Data for the first year were derived from the PLATO trial. For the long-term Markov model the German and international long-term health states and selected conservative assumptions were utilized to extrapolate survival conditional on whether a non-fatal MI, a non-fatal stroke or no event occurred during the first year. Costs were based on official tariffs (e.g. DRGs) and published literature. For the base case, a medical cost of €2.99 was applied for ticagrelor. Daily cost for clopidogrel was applied in a range from €0.38 (lowest generic) to €2.44 (Plavix) with an average generic cost of €0.68 (base case). Extensive probabilistic, uni- and multivariate sensitivity analyses were performed. RESULTS: Treatment with ticagrelor was associated with 0.16 LYG versus clopidogrel. The cost per LYG in the base case was €3,361. Overall the cost per LYG ranged from €430 (dominant situation) to €4,077 compared with clopidogrel (Plavix vs. lowest generic). Results were consistent.