

mation were calculated. **RESULTS:** Taking into account the results from MC simulations, the PTA/S alternative is the most expensive and less effective (€ 24,581 and 6.857 QALYs), but attending to small differences and the large variability on results between alternatives, these results are not conclusive. The least costly alternative is PTA/S/BP (€ 18,351), with an effectiveness of 7.049 QALYs. PTA/S/BP shows higher effectiveness than PTA/S, but lower effectiveness than BP (7.281 QALYs). The cost of the BP alternative is € 24,056. PTA/S/BP and BP alternatives show higher probabilities of being efficient alternatives. If the willingness to pay is € 30,000/QALY, opportunity cost of implementing PTA/S/BP would exceed € 15,000 per patient treated. **CONCLUSIONS:** Although the results of effectiveness identified PTA/S/BP as the most efficient alternative for a willingness to pay less than € 40,000/QALY, the probability of making a proper decision is only about 50%. This situation, together with the high opportunity costs, encourages the development of new clinical trials or observational studies in our environment in order to remove uncertainty over the results.

## PCV92

## COST UTILITY OF RANOLAZINE IN THE SYMPTOMATIC TREATMENT OF PATIENTS WITH CHRONIC ANGINA PECTORIS IN SPAIN

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**OBJECTIVES:** Ranolazine is an antianginal agent that was approved for use in the EU in 2008 as an add-on therapy for the symptomatic treatment of chronic angina pectoris in patients who are inadequately controlled by or intolerant to first-line antianginal therapies, such as beta blockers and calcium antagonists. The objective of this study is to assess the cost utility of ranolazine relative to placebo as an add-on therapy for the symptomatic treatment of patients with chronic angina pectoris in Spain, from the payer's perspective. **METHODS:** We use a decision tree model with a time horizon of one year, under the Spanish health service perspective. Transition probabilities and utility levels for different angina frequencies were obtained from published clinical trials. Costs were obtained from Spanish official DRGs for patients with chronic angina pectoris. We calculate the incremental cost utility ratio of using ranolazine compared with placebo as an add-on treatment. Sensitivity analyses include Monte Carlo simulations and ANCOVA models. **RESULTS:** The incremental cost utility ratio is 8455 € per QALY per patient in Spain. Sensitivity analyses show that if the decision makers' willingness to pay is set at half the usual threshold (15,000 € per QALY), the treatment with ranolazine will be cost effective at a 95% level of confidence. The incremental cost utility ratio is particularly sensitive to changes in the level of utility of those non hospitalized patients with mild or moderate angina frequency. The cost of ranolazine explains 6.44% of the variation in our results. **CONCLUSIONS:** Ranolazine is a very cost effective add-on therapy for the symptomatic treatment of chronic angina pectoris in patients who are inadequately controlled by or intolerant to first-line antianginal therapies in Spain.

## PCV93

## THE POLYPILL IN THE PRIMARY PREVENTION OF CARDIOVASCULAR DISEASE: COST-EFFECTIVENESS IN THE DUTCH POPULATION

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**OBJECTIVES:** Cardiovascular disease is a major cause of illness and death. The polypill seems to offer a promising strategy in the prevention of cardiovascular diseases. The aim of the present study was to estimate the cost-effectiveness of the polypill in the primary prevention of cardiovascular diseases in people at a 10 years risk of cardiovascular death of 5%, 7.5% and 10% or above in the The Netherlands. **METHODS:** A computer simulation study was conducted, in which people eligible for prescription were identified by opportunistic screening. The polypill was offered in different compositions: scenario 1: the polypill as used in the Indian polycap study, with three different types of blood pressure lowering drugs, a lipid lowering drug, and an antiplatelet agent, scenario 2: as 1) but without aspirin, scenario 3: as 2) but with a double statin dose (which is the standard in The Netherlands), and scenario 4: separate antihypertensive and/or statin medication. Outcome measures were cases of acute myocardial infarction and stroke prevented, QALYs gained, and the costs per QALY gained. **RESULTS:** All scenarios are cost-effective with an incremental cost-effectiveness ratio between €8,700-12,000 per QALY compared with usual care. The most preferable is scenario 3, because for all risk thresholds most health gain was reached. At a 10-years risk of 7.5% scenario 3 would prevent approximately 3%-5% of all cardiovascular events. **CONCLUSIONS:** Depending on the cardiovascular risk, opportunistic screening in combination with the polypill or separate medication offers a cost-effective strategy. Most health gain is achieved by the polypill without aspirin and a double statin dose. The major advantage of a polypill without aspirin is avoiding aspirin's adverse effects.

## PCV94

## DRONEDARONE IS COST-EFFECTIVE FOR THE PREVENTION OF DOWNSTREAM CARDIOVASCULAR MORBIDITY AND MORTALITY IN AUSTRALIAN PATIENTS WITH ATRIAL FIBRILLATION

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**OBJECTIVES:** To assess the cost-effectiveness of the anti-arrhythmic agent dronedarone for the prevention of cardiovascular disease (CVD), comprising myocardial infarction and stroke) and death among Australian patients with atrial fibrillation

(AF). **METHODS:** A Markov model was developed with one-year cycles and three health states: 'Alive without CVD', 'Alive post CVD' and 'Dead'. Model subjects' cardiovascular and mortality risks were derived from a cohort study of 313 AF patients from the Geelong Hospital, a tertiary hospital in Victoria, Australia. Decision analysis quantified the health and economic effects of giving all patients dronedarone versus usual care. Data regarding the efficacy of dronedarone were derived from the two-year 'ATHENA' randomized controlled trial (Hohnloser, *New Engl J Med*, 2009). This showed that compared to placebo, dronedarone 400mg bd reduced the risk of hospitalized cardiovascular events and death by 24% (hazard ratio 0.76, 95%CI 0.69-0.84). Relevant costs and utilities were drawn from published sources. The annual cost of dronedarone was AUD \$1668. Follow-up was simulated for ten years, with application of a 5% annual discount rate to costs and years lived. **RESULTS:** In the usual care arm, 26.3% and 12.0% of the cohort were predicted to suffer myocardial infarctions and strokes, respectively. The equivalent figures in the dronedarone arm were 21.4% and 9.7%, equating to numbers needed to treat of 20.3 for myocardial infarction and 44.6 for stroke. Compared to usual care, each dronedarone subject lived an extra 0.44 years and 0.35 QALYs (discounted). Net costs of dronedarone amounted to AUD \$4495 per subject (discounted). Incremental cost-effectiveness ratios were therefore AUD \$10,187 per life year gained and AUD \$12,966 per QALY gained. Sensitivity analyses indicated the results to be robust. **CONCLUSIONS:** Dronedarone represents a cost-effective means to prevent downstream cardiovascular morbidity and mortality among Australian patients with AF.

## PCV95

## ECONOMIC ANALYSIS OF INTERVENTIONS TO IMPROVE CONTROL OF BLOOD PRESSURE IN NIGERIAN HOSPITALS

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**OBJECTIVES:** Emerging evidence shows that the prevalence of hypertension is on the rise in most African countries while control remains poor. There are effective interventions which could be implemented in hospitals of low resource setting to improve control of blood pressure amongst hypertensive patients. This study aimed to evaluate the cost-effectiveness of interventions that could be implemented in Nigerian hospitals in order to ensure better control of high blood pressure in patients with hypertension. **METHODS:** The study employed decision analytic modeling. Interventions were obtained from a meta-analysis. The Markov process model calculated clinical outcomes and costs during a life cycle of 30 years of 1000 hypertensives stratified by 3 cardiovascular risk groups, under the alternative intervention scenarios. Quality adjusted life year (QALY) was used to quantify clinical outcome. The average cost of treatment for the 1000 patient was tracked over the Markov cycle model of the alternative interventions and results were presented in Nigerian Naira. Probabilistic cost-effectiveness analysis was performed using Monte Carlo simulation, and results presented as cost-effectiveness acceptability curves and frontiers. Population expected value of perfect information analysis was also conducted. **RESULTS:** Patient education intervention was the most cost-effective option across the 3 cardiovascular risk groups except in high cardiovascular risk scenario where a trade-off has to be made in terms of commitment of extra fund (approximately N10,000 per QALY). Professional led care was the second best consistent option across the 3 cardiovascular risk groups although it will require extra financial investment to the tune of N30,000 per QALY. **CONCLUSIONS:** The result of this study shows that patient education programme followed by professional led care intervention could be a feasible strategy in order to ensure that patients with high blood pressure are better controlled.

## PCV96

## COST-UTILITY ANALYSIS OF THE LONG-TERM CARDIOVASCULAR PREVENTION PROGRAM IN RUSSIAN FEDERATION AS AN ARGUMENT FOR THE WIDESPREAD INTRODUCTION OF PREVENTIVE TECHNOLOGIES INTO CLINICAL PRACTICE

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**OBJECTIVES:** To evaluate the economic efficiency of 10-years cardiovascular prevention program in primary care of Russian Federation. **METHODS:** In 1977-1990 in Moscow a large prevention project was realized. The project was realized in two primary care areas of Moscow and included men with baseline age 40-59. One primary care area was intervention area where cardiovascular prevention program was realized during the 5 years, other area was control. Participants of intervention (n=3488) and control primary care areas (n=3168) had the similar age, education and cardiovascular morbidity. The cardiovascular prevention program included preventive counseling for participants with CVD risk factors. All cardiovascular endpoints were registered during 10 years. In this study we calculated the gain of life years saved (LYS) and quality adjusted life years (QALY) in intervention group compared with control group (on 1000 participants) during the 5 years on the intervention and during 10 years of total follow up period. Also we calculate the total cost of the program in the prices of 2008 years. The cost utility analysis was conducted with calculation of cost per gained QALY during 5 years and during 10 year. **RESULTS:** The number of gained LYS in the intervention group was 45.7 on 1000 participants in 5 years and 139.4 – in 10 years. The number of QALY was 46.2 and 132.7 on 1000 participants in 5 and 10 years accordingly. The total costs were 174,124\$ on 1000 participant in 5 years and 237,928\$ in 10 years. Cost per QALY gained was 3769\$ during the 5 years and 1793\$ during the 5 years. The gross domestic product per capita in 2008 was 11,806\$. **CONCLUSIONS:** Cardiovascular prevention program for men aged 40-59 is highly cost-effective and economic arguments can be used for policy-makers.