developed to project lifetime costs and benefits of lipid therapy. Clinical trial data were used to estimate LDL-C reductions for different treatment strategies. Effect of LDL-C reductions on CHD event rates was estimated using Framingham equations and Spanish Instituto Nacional de Estadística data on non-CHD-related mortality. Direct costs of CHD events in Spain, Spanish prices for simvastatin, atorvastatin and EZ10 were used to project lifetime costs. Model was run for a population consisting of all CHD and CHD-equivalent patients started on A10 in an observational Lipid Lowering Treatment study conducted in Spain, and not at LDL-C goal after 60 days of treatment. RESULTS: For these patients N = 54 (mean age 62.5 years, 64.8% male, lipid profile on A10 mean LDL-C 148.7mg/dl, TC 225.9mg/dl, HDL 45.9mg/dl), switching to EZ10 co-administered with S20 compared to atorvastatin titration is projected to increase the life expectancy from 15.99 to 16.31 years for CHD patients and from 18.11 to 18.23 years for CHD equivalent patients with a discounted incremental cost per life year gained of 7,855 EURO for CHD patients and 15,356 for CHD equivalent patients with a discounted incremental cost per life year gained. The cost-effectiveness profile of simvastatin for CHD and CHD-equivalent patients not at goal on atorvastatin is projected to be a cost-effective alternative to atorvastatin titration.

**PCV36**

ECONOMIC EVALUATION OF PRIMARY PREVENTION OF CVD EVENTS WITH STATINS IN ITALY
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OBJECTIVES: Cardiovascular diseases (CVD) are the leading cause of morbidity and mortality. Treatment with statins has shown to be effective in controlling cholesterol levels in dyslipidemic subjects and in preventing CVD. The objective of this analysis was the evaluation of the economic impact of the CVD primary prevention with statins in Italy. METHODS: Alternatives: market mix for statins (low dosages assumed as initial dosages) marketed in Italy (weighted with the current market shares) compared with no intervention. Population: sample of high-risk subjects with an absolute CV risk level ≥2% per year, derived from a population study conducted in the Verona area in Italy. Perspective: National Health Service (NHS). Technique: cost-effectiveness analysis, making economic and health projections in a hypothetical cohort of 1000 subjects in primary prevention; an incremental cost per life year gained (ICER LYG) has been calculated. Time: 10 years. Costs: drugs and direct medical costs quantified in using NHS tariffs expressed in Euro 2003. Effects: the effects of different statins in controlling cholesterol levels, as measured with the CURVES study (Jones P et al, 1998) has been used to model coronary (CHD) morbidity and mortality from CVD with the Framingham risk equations (Anderson KM et al, 1990). RESULTS: A primary CVD preventive intervention with statins in a hypothetical cohort of 1000 high-risk subjects can avoid 70 CHD events and 28 CVD deaths, thus projecting 138 LYG. After having considered costs for drugs (4,789,542€) and savings due to events avoided (319,722€), the net cost of the intervention is 4,469,820€ with a ICER LYG of 32,458€. CONCLUSIONS: The cost-effectiveness profile of CVD primary preventive intervention with statins is in the range of what is considered cost-effective in absolute values by the scientific community.

**PCV37**

ECONOMIC EVALUATION OF TRANSESOPHAGEAL ECHOCARDIOGRAPHY (TEE) GUIDED CARDIOVERSION IN THE ANTICOAGULATION IN CARDIOVERSION USING ENOXAPARIN (ACE) TRIAL FROM THE PERSPECTIVE OF STATUTORY HEALTH INSURANCE (SHI) IN GERMANY
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OBJECTIVES: To estimate—from the German SHI perspective—economic consequences of using the low-molecular-weight heparin enoxaparin subcutaneously (ENOX) instead of intravenous unfractionated heparin followed by oral phenprocoumon (UFH/PPC) for anticoagulation in patients undergoing TEE-guided early electrocardioversion from nonvalvular atrial fibrillation (AF). METHODS: As ENOX is noninferior to UFH/PPC in preventing deaths and ischemic, embolic, and hemorrhagic events (Stellbrink C, et al. ACE trial. Circulation 2004), a cost-minimization analysis (CMA) was performed. The target variable “incremental cost for ENOX versus UFH/PPC” was quantified using a modelling approach based on decision-tree technique. The CMA encompassed 28 (26–30) treatment days with phase I of 5 (3–8) days comprising diagnostics, initiation of anticoagulation, and cardioversion. Phase II with the remaining days comprised continued anticoagulation. Resource use was verified by a survey in the in- and outpatient sectors. Costs were given by SHI expenses and were quantified by multiplying utilised resource items by the price or tariff of each item, according to German Health Care regulations. RESULTS: In the base-case analysis, phase I was outpatient based for the majority of ENOX patients opposed to inpatient treatment for all UFH/PPC patients, whereas phase II was entirely outpatient based for both patient groups. There were savings of 579€ per patient with ENOX (892€) compared to UFH/PPC (1471€). Comprehensive sensitivity analyses (impact analysis, Monte Carlo simulation) showed the robustness of the model. Expenses for the inpatient-based phase I with UFH/PPC had by far the greatest influence on the extent of savings obtained. Simultaneous random variation of all model parameters within their empirically given intervals revealed savings obtained by ENOX in 93% of 10,000 simulated comparisons versus UFH/PPC. CONCLUSIONS: In TEE-guided early electrocardioversion of nonvalvular AF, anticoagulation with ENOX offers SHI in Germany an enormous saving potential when used instead of UFH/PPC.

**PCV38**

COSTS OF MYOCARDIAL INFARCTION TREATMENT IN RUSSIAN FEDERATION
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OBJECTIVE: To calculate costs for patients with myocardial infarction (MI) in common medical practice in Russian Federation. METHODS: Data on resource use for hospital treatment of patients with acute myocardial infarction were extracted from 99 medical charts at 3 hospitals at Moscow, Tula and Vladimir. Data on resource use for out-patient follow-up for patients after acute myocardial infarction were identified according to experts’ opinion. A total of 12 experts filled in the questionnaire for identifying typical follow-up strategy for 1.5 years after MI. Direct medical costs were calculated on the basis of price-lists for medical services and median prices for drugs given in a wholesale pharmaceutical informational bulletin. RESULTS: Median
cost for acute period of MI at hospital was 25,340.00 rubles ($794.36) per patient. There was no significant difference between 3 hospitals. Median total cost for follow-up period in first 6 months after MI was 28,706.63 rubles ($899.89) per patient for services and drugs mentioned by experts. Median cost for second 6 months was 11,626.71 rubles ($364.47) per patient; each 6 months after it required 10,722.73 rubles ($336.14).

CONCLUSION: Costs are relatively low because of rare use of expensive technologies; only 15% of patients received thrombolytic therapy; no coronary artery bypass surgery or stent implantation were used.

PCV39

MODELING THE ECONOMIC CONSEQUENCES OF IMPLANTING DUAL CHAMBER VS. SINGLE CHAMBER PACEMAKERS IN THE UK

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OBJECTIVES: To estimate the long-term economic and health impact of managing bradyarrhythmia due to sinoatrial node disease or atrioventricular block with a dual chamber (DDD or DDDR) vs. single-chamber ventricular pacemaker (VVI or VVIR).

METHODS: A discrete event simulation of 2 identical cohorts of 1000 patients for 5 years after implantation tracks development of post-operative complications, severe pacemaker syndrome leading to replacement, atrial fibrillation (which may become chronic and require anticoagulants), and stroke. Life expectancy is assumed the same with either device. Risk functions were developed for each device based on two long-term randomized trials (Canadian Trial of Physiological Pacing, CTOPP and Mode Selection Trial in Sinus-Node Dysfunction, MOST). Sensitivity analyses were completed for key input parameters. Direct medical costs to the NHS are reported in 2003 British Pounds Sterling (GBP). Benefits were discounted at 1.5%, and costs 6%.

RESULTS: Overall, 29.1% in each cohort died within 5 years of the implant. Post-operative complications requiring reoperation increased from 6.4% for VVI(R) to 7.7% with DDD(R), atrial fibrillation dropped from 22% to 17%; severe pacemaker symptoms developed in 16.8% with VVI(R) leading to a wish to switch to DDD(R). Total costs over 5 years were about 4300 GBP per patient in either cohort. Based on 100 replications, additional health benefits from DDD(R) are achieved with a mean net cost of 43 GBP per patient, and 0.09 QALY gained: a mean cost-effectiveness ratio of 477 GBP per QALY. In 26% of the replications, however, dual chamber dominates single chamber.

CONCLUSIONS: Whilst implanting the DDD(R) increases the cost of the initial implantation, this is predicted to be largely offset by a reduction in long-term complications when compared with VVI(R).

PCV40

COSTS OF ISCHEMIC STROKE TREATMENT IN RUSSIAN FEDERATION

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OBJECTIVE: To calculate costs for patients with ischemic stroke (IS) in common medical practice in Russian Federation.

METHODS. Data on resource use for hospital treatment of patients with IS were extracted from 70 medical charts at 2 hospitals at Moscow. Data on resource use for out-patient follow-up for patients after acute myocardial infarction were identified according to experts’ opinion. Six experts filled in the questionnaire for identifying typical follow-up strategy for 1.5 years after MI. Direct medical costs were calculated on the basis of price-lists for medical services and median prices for drugs given in a wholesale pharmaceutical informational bulletin.

RESULTS: Median cost for acute period of IS at hospital was 25,187.00 rubles ($789.56) per patient. There was some difference in costs between 2 hospitals, but no statistical significance was found. Computer tomography was performed only in 38% patients (mostly at one hospital). Median total cost for follow-up period in first 6 months after IS was 42,644.50 rubles ($1336.82) per patient for services and drugs mentioned by experts. Median cost for second 6 months was 13,561.08 rubles ($425.11) per patient; each 6 months after it required 9996.69 rubles ($313.38).

CONCLUSIONS: According to experts’ opinion carotid endarterectomy is performed in no more than 10% patients after IS.

PCV41

COST-EFFECTIVENESS OF PHARMACEUTICAL TREATMENTS OF HYPERCHOLESTEROLEMIA IN CATALONIA, SPAIN

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OBJECTIVES: Pharmaceutical treatment of hypercholesterolemia is recommended in individuals with a LDL-cholesterol level of ≥190mg/dl and 130–189mg/dl plus two other coronary heart disease risk factors or a coronary heart disease risk >20% in 10 years. The objective of this study was to assess the cost-effectiveness of pharmaceutical treatments of hypercholesterolemia in Catalonia, Spain.

METHODS: Treatments evaluated included 20, 40, and 80 mg/day of lovastatin and fluvastatin, 10, 20, and 40 mg/day of pravastatin, simvastatin and atorvastatin, 12 and 24 g/day of cholestyramine, and 1.2 g/day of gemfibrozil. The cost-effectiveness was evaluated comparing annual treatment costs and the percentage of LDL-cholesterol reduction. Treatment costs included medication, medical visits control measures, and treatment of secondary adverse effects. Wholesale prices in 2002 were used to estimate medication costs. A metanalysis was carried out to estimate effectiveness of different treatments, including all published randomized, double blind clinical trials referred on Medline from 1991 to 2002.

RESULTS: The annual cost of medication ranged from 332.98€ for 20mg/day lovastatin to 1105.17€ for 40mg/day atorvastatin. The percentage of LDL-cholesterol reduction ranged from 10% for 12g/day cholestyramine to 49% for 80mg/day atorvastatin. The average cost-effectiveness ratios in terms of € per one per cent of LDL-cholesterol reduced were 11.26€–22.55€ for atorvastatin, 12.00€–21.96€ for simvastatin, 13.87€–21.64€ for lovastatin, 15.24€–24.69€ for fluvastatin, 20.96€–41.77€ for pravastatin, 32.61€ for gemfibrozil, and 35.21€–45.55€ for cholestyramine. The incremental cost-effectiveness analysis showed that the more efficient cholesterol-lowering therapies were 10mg/day atorvastatin, 10mg/day simvastatin, 20mg/day lovastatin, 20mg/day fluvastatin, and 20, 40 and 80mg/day atorvastatin.

CONCLUSIONS: Efficient statin therapies detected in this study should be the first election cholesterol-lowering drugs used in patients with hypercholesterolemia in Catalonia.

PCV42

PUBLIC HEALTH AND ECONOMIC IMPACTS OF RAISING THE LEGAL SMOKING AGE IN CALIFORNIA

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OBJECTIVE: Research has shown that most smokers start before the age of 18 and after that age the probability to starting smoking decreases steadily. Furthermore, smokers who start earlier in life are less likely to quit and reducing or delaying initiation could have a large impact on public health. In 2002,