with low-risk myocardial infarction. METHODS: The participants in this 12-month prospective study were 153 consecutive patients with low-risk myocardial infarction (MI) referred to their primary care center for follow-up care. Of these patients, 113 were referred to a mixed primary and specialized care program that included physical exercise, cardiovascular risk control, an antismoking program, health education talks and psychological evaluation. The other 40 patients served as controls. We analyzed the results after three months and 1 year of follow-up. RESULTS: There were no differences between the two groups at baseline. After 1 year, improvements were seen in smoking habit (4.6% vs. 15.6%; \( P < 0.05 \)) and body mass index (26 [2] vs. 29 [2]; \( P < 0.05 \)). Dyslipidemia, glucose and blood pressure were similar in both groups after follow-up. Greater improvements in the group of patients who participated in the program were seen after 1 year in quality of life (78 [2] vs. 91 [2]; \( P < 0.05 \)), exercise capacity (10.3 [2] vs. 8.4 [3]; \( P < 0.01 \)) and return to active employment (84.6% vs. 53.3%; \( P < 0.05 \)). CONCLUSIONS: After one year of follow-up, the cardiac rehabilitation program coordinated by cardiological and primary care services for low-risk post-MI patients improved quality of life, and increased exercise tolerance, active employment, and the number of participants who quit smoking. The mixed program also reduced body mass index. These results suggest the need for similar programs.

**PCV80**

**COST ESTIMATION IN PATIENTS WITH AN AHEROTROMBOTIC EVENT**

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OBJECTIVE: To estimate the direct medical costs in patients at high risk that suffered an atherotrombotic event (AE), i.e., the cost of the acute event and the costs related to the disease during a two year follow-up period in patients with myocardial infarction and stroke, treated in third care level in private institutions in the Mexican Health System. METHODS: This is a descriptive observational and multicentric study. Each patient included in the study cohort has an active medical file with a complete record for at least a 2-year period after the AE. This study is based on an incidence costing approach and only includes the perspective of the payers. The unitary costs used are those officially published by private institutions. All the amounts are set in 2005 Mexican pesos. The 2005 exchange rate is 11 Mexican pesos per US dollar. RESULTS: A patient who experiences a stroke stays at least 5 days in Intensive Care. The expected cost per treated patient with stroke reaches US$7876. The most important category of cost during the acute phase is hospitalization (US$3924; 50%). On the other hand, the total direct cost incurred per patient with acute coronary syndrome (ACS) is US$3367 per year of follow-up and US$16,381 in the acute event. The most relevant costs are both pharmacy costs (US$2354) and revascularization procedures (US$9319). Coronary artery stent implantation is the most common revascularization procedure (70%). CONCLUSIONS: AE are associated with high costs during the years after the acute event, in special high incidence of hospitalization and drug cost. These results, especially the proportions between cost items, are consistent with international studies. Effective prevention and treatment of AE should be targeted not only on patients and medical professionals but also on health decision makers.

**PCV81**

**DISCRETE EVENT SIMULATION OF LONG-TERM HEALTH BENEFITS AND COST-EFFECTIVENESS OF IMPLANTING DUAL CHAMBER VS. SINGLE CHAMBER VENTRICULAR PACEMAKERS IN ITALY**

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OBJECTIVE: To estimate the long-term economic and health impact of managing bradycardia due to sinoatrial node disease or atrioventricular block with a dual (DDD or DDDR) vs. single chamber ventricular pacemaker (VVI or VVIR). METHODS: A discrete event simulation was constructed to evaluate the outcomes over five years. During the simulation, each patient may develop post-operative complications, severe pacemaker syndrome leading to replacement of the VVI(R) with DDD(R), atrial fibrillation (which may become chronic and require anticoagulants), or have a stroke. A time for each event is sampled from the distribution of failure times specified by the individual’s risk profile. Life expectancy was estimated and assumed the same with either device. Model risk functions are based on long-term randomized trials (Canadian Trial of Physiological Pacing and Mode Selection Trial in Sinus-Node Dysfunction). Probabilistic sensitivity analyses were performed for key input parameters. Direct medical costs are reported in 2004 Euros (€). Benefits and costs are discounted at 3% per year. RESULTS: Chronic atrial fibrillation was estimated to be 24% lower with DDD(R). Discounted costs over 5 years were about €10,000 per patient in either cohort, mean net additional cost of €106 with DDD(R). DDD(R) led to 0.09 additional QALY; a mean cost-effectiveness ratio of €1177/QALY, with 21% of replications indicating dominance for DDD(R). Severe pacemaker syndrome requiring switch to DDD(R) occurred in 16.8% with VVI(R); the results are sensitive to the proportion that would seek replacement. CONCLUSION: Lower initial costs with VVI(R) were offset by second operations to switch to DDD(R) and costs of atrial fibrillation. Thus, dual chamber pacemakers are economically attractive in management of patients with bradycardia.

**PCV82**

**COST-UTILITY OF CILOSTAZOL FOR THE TREATMENT OF INTERMITTENT CLAUDICATION IN SCOTLAND**

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OBJECTIVE: To evaluate short-term cost-effectiveness (cost-utility) of cilostazol for the treatment of intermittent claudication from the perspective of the Scottish NHS. METHODS: A decision analytic model was constructed and analysed from the perspective of the Scottish NHS. Direct medical costs include drug costs - evaluated at retail prices excluding taxes, and treatment costs. Treatment costs included the cost of patients, or have a stroke. A time for each event is sampled from the distribution of failure times specified by the individual’s risk profile. Life expectancy was estimated and assumed the same with either device. Model risk functions are based on long-term randomized trials (Canadian Trial of Physiological Pacing and Mode Selection Trial in Sinus-Node Dysfunction). Probabilistic sensitivity analyses were performed for key input parameters. Direct medical costs are reported in 2004 Euros (€). Benefits and costs are discounted at 3% per year. RESULTS: Chronic atrial fibrillation was estimated to be 24% lower with DDD(R). Discounted costs over 5 years were about €10,000 per patient in either cohort, mean net additional cost of €106 with DDD(R). DDD(R) led to 0.09 additional QALY; a mean cost-effectiveness ratio of €1177/QALY, with 21% of replications indicating dominance for DDD(R). Severe pacemaker syndrome requiring switch to DDD(R) occurred in 16.8% with VVI(R); the results are sensitive to the proportion that would seek replacement. CONCLUSION: Lower initial costs with VVI(R) were offset by second operations to switch to DDD(R) and costs of atrial fibrillation. Thus, dual chamber pacemakers are economically attractive in management of patients with bradycardia.
horizon of the trial. Sensitivity analysis suggested that the results were most sensitive to the cost of an angiography, the utility values estimated, and the price of cilostazol. CONCLUSIONS: Cilostazol is expected to be a cost-effective treatment for intermittent claudication patients in Scotland.

PCV83

COST-EFFECTIVENESS OF ENDOVASCULAR VERSUS CONVENTIONAL ABDOMINAL AORTIC ANEURYSM REPAIR AT ONE YEAR; RESULTS OF A RANDOMIZED TRIAL
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OBJECTIVE: Reduced hospital stay and intensive care unit stay after endovascular aneurysm repair (EVAR) compared to open repair (OR) of abdominal aortic aneurysms (AAA) are expected to result in reduced costs of AAA repair. The cost and cost-effectiveness of OR and EVAR in the first postoperative year were compared in a randomised trial. METHODS: In a multicenter randomised trial comparing OR and EVAR we randomly assigned 149 patients to OR and 151 to EVAR. Complications, costs and cost-effectiveness were determined one year after surgery. The uncertainty surrounding the cost-effectiveness ratios (iCER) was addressed by bootstrapping. RESULTS: Ten patients had died in the OR group and 9 in the EVAR group (chi-square p = 0.8). In the OR group, 32 patients had one or more severe complications and in the EVAR group, 27 patients (chi-square p = 0.5). EVAR was associated with €4,480 additional direct costs per patient (€18,138 versus €13,659) and a decrease in QALY of 0.72 as compared with 0.73 (difference 0.01 year, 95% CI –0.04–0.06). With regard to event free survival over 85% of the bootstrap estimates EVAR indicated favourable health outcomes for EVAR, but against prohibitively higher costs. From a health economic perspective OR is preferred. CONCLUSION: In patients suitable for both treatments, EVAR is not cost-effective in the first postoperative year.

PCV84

SURGICAL TREATMENT OF ABDOMINAL AORTIC ANEURYSM: ANALYSIS OF OPERATING COSTS. ENDOVASCULAR TREATMENT VERSUS TRADITIONAL SURGERY
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OBJECTIVES: Open Surgery (OS) of abdominal aortic aneurysms (AAAs) is a major surgical procedure with elevated morbidity and a low but definite mortality. Endovascular repair (EVAR) has now emerged as a minimally alternative to OS, and its effectiveness has now been reported in the literature with reduced peri-operative mortality and complication rates. The aim of this study was to compare the full cost of the two treatments. METHODS: A prospective, observational study was conducted in a Vascular-Surgery Division from October 2003 to April 2004. Data for patients undergoing treatment of an AAA were collected. Cost assessment was carried out from the hospital perspective according to the Activity Based Costing principles. RESULTS: Data for 44 patients were gathered: 73% underwent OS and 27% EVAR. The mean age was 66.7 (±6.7) years and 7% of the patients were female. Comorbidity rates were similar in the two treatments group. There was no difference in mean hospital length of stay (LOS) between the two options (ten days). Mean post-operative LOS was 6.5 days (24), with significant difference between the two groups (OS 7.5 ± 4 vs. EVAR 3.5 ± 0.6, p < 0.0001). Intensive therapy was necessary only for OS patients (28%). The study revealed that the overall mean cost to treat an AAA, irrespective of the technique used, was €11,578.34 (€11,063.31 OS vs. 12,971.56 EVAR). A sub-analysis was performed for complicated patients alone and the mean cost was €13,487.46, with a difference between the two treatments tending almost to zero. The use of post-operative resources differed between the two treatments, resulting in differences for the mean post-operative costs (€5,686.07 for OR vs. €2,185.49 for EVAR). CONCLUSIONS: Stent graft treatment of AAAs has been shown to be effective in reducing the amount of nursing assistance, LOS and the need for intensive therapy at the post-operative stage.

PCV85

CLINICAL OUTCOME AND COST-EFFECTIVENESS OF DIFFERENT BYPASS MATERIALS IN VASCULAR SURGERY
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OBJECTIVES: Bypass surgeries to circumvent occluded arteries are common procedures not only in cardiac surgery but also for occlusions in lower extremities or thorax. Different materials for the bypass procedures are available: venous, arterial and synthetic; each with different properties, advantages and costs. The objective is to assess and compare the effectiveness and benefit of various bypass materials in leg bypass surgery from a medical and economic perspective. METHODS: A systematic review of the literature was performed using established electronic data bases including Medline, Embase, Cochrane Library and others for literature from 1999–2004 in English and German. Of 4526 articles originally retrieved, 630 were examined in detail. RESULTS: The systematic review of literature resulted in two systematic reviews and eleven randomized trials comparing the medical effects of different bypass materials in leg bypass surgery. From a medical perspective autologous material is the superior choice compared to prosthetic materials in leg bypass surgery. According to the developed model the cost-effectiveness of different bypass materials depends on the costs and structure of the hospital. The experience of the surgeon is an important factor.

PCV86

THE ECONOMIC BURDEN OF EXPERIENCING MAJOR COMPLICATIONS DURING PERCUTANEOUS CORONARY INTERVENTION
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OBJECTIVES: Technological advances have enabled percutaneous coronary intervention (PCI) to be applied to expanding indications. However, escalating costs are of concern to patients, providers and payers. This study assessed the incremental medical costs of treating major in-hospital procedural complications incurred by patients undergoing PCI. METHODS: We con-