THE COST-EFFECTIVENESS OF DIAGNOSTIC STRATEGIES WITH ANGIOGRAPHY AND/OR DUPLEx SCANNING FOR AORTOILIAC AND FEMOROPopliteAL ARTERIAL DISEASE
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OBJECTIVES: To assess the cost-effectiveness of three diagnostic strategies for the aortoiliac (AI) and femoropopliteal (FP) arteries in patients with peripheral arterial occlusive disease (PAOD): angiography (reference), duplex scanning (DS) plus supplementary angiography if DS is inconclusive, and DS plus confirmative angiography if DS is positive. METHODS: Incremental cost-effectiveness analysis from a provider perspective with the identification of a significant (positive) or insignificant (negative) diameter reduction (= the number of identified cases) as the primary effect parameter. Sensitivity (AI: 0.86–0.91; FP: 0.80–0.85) and specificity (AI: 0.97–0.99; FP: 0.96–0.98) data of DS were derived from a meta-analysis. The real costs of both diagnostic modalities were calculated from the associated personnel, material and overhead costs at our hospital for the year 2000. Costs were expressed in euro. RESULTS: The costs of DS were €67.20 and €63.28 for the AI and FP tract respectively. The cost of angiography (including a one-day admission) was €503.10. The reference strategy resulted in an unambiguous diagnosis in 90% of the AI as well as FP cases compared with 89% (AI) and 85% (FP) for the supplementary strategy. Assuming the disease prevalence in the laboratory between 70–90% however, the extra costs per identified case for the reference strategy compared with the supplementary strategy ranged from €59,000–€14,000 for the AI tract and from €8,300–€5,100 for the FP tract. CONCLUSIONS: The reference strategy is most effective for both, the AI and FP tracts. If society does not want to spend over €10,000 per identified case, then for the AI tract the supplementary strategy is the most cost-effective one. If society is willing to spend €10,000 per identified case, then one should prefer the reference strategy for the FP tract.

PROBABILISTIC SENSITIVITY ANALYSIS FOR EVALUATING COST-EFFECTIVENESS IN SECONDARY PREVENTION OF ISCHEMIC EVENTS
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OBJECTIVES: In the case of a determinist cost-effectiveness analysis (CEA), uncertainty related to the parameters can be handled by a probabilistic sensitivity analysis for estimating confidence interval (CI) for incremental cost-effectiveness ratio (ICER). The study aim was to assess uncertainty in a CEA from a French perspective of two strategies in secondary prevention of ischemic events: clopidogrel versus aspirin. METHODS: From a Markov model based on CAPRIE trial (Clopidogrel versus Aspirin in Patients at Risk of Ischemic Events 19185 patients), a CEA was run in order to assess the cost per life year saved with clopidogrel versus aspirin. We supposed that each of the parameters of the model, instead of taking a single value, was a random variable to which a distribution could be associated: beta distribution was used in the generation of transition probabilities (the parameters of distribution depend on the study characteristics from which the parameters issue) and triangular distribution of unit cost. Using a Monte-Carlo simulation, the joint distribution of mean incremental cost and mean incremental effectiveness were simulated and displayed in the cost-effectiveness plan. Ninety five percent confidence intervals were estimated using percentile method. RESULTS: The results of the Monte-Carlo simulation (10000 replications) were all clustered in the quadrant corresponding to the situation where clopidogrel is more effective and more expensive. For a hypothetical cohort of 1000 patients treated during 2 years, the estimation of the additional cost was equal to €1041 per patient CI = [952; 1,130], number of life years gained to 0,068 per patient (CI = [0,046; 0,094]). The ICER was equal to €15,907 CI = [11,655; 21,067]. CONCLUSION: Confidence intervals estimated from the probabilistic sensitivity analysis were not too wide. This suggested that the CEA is robust and provides reliable data for decision-makers. Within its confidence interval, the ICER remains within acceptable range, and compares favourably with other therapeutic strategies.

ACCEPTANCE AND RELIABILITY OF A COST-MEASUREMENT QUESTIONNAIRE IN CARDIAC REHABILITATION
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OBJECTIVES: Comprehensive measurement of disease related cost in an outpatient setting is a crucial task for economic assessment. In decentralized health systems like in Germany provider or third party payer data are not readily accessible suggesting a patient oriented approach. Objective of this pilot study was to develop a retrospective cost measurement instrument for cardiac rehabilitation patients which would allow reliable and—compared to prospective measurement—time and resource saving assessment of cost in studies with a medium to long-term time horizon. METHODS: A cost questionnaire was developed covering medical and non-medical resource use retrospectively over a 12-week time period after discharge from inpatient cardiac rehabilitation. One hundred and six patients were included in the pilot study (mean age 55, male 85%, myocardial infarction 51%, bypass
surgery 42%). The questionnaire was sent out twelve weeks after discharge and covered the period since. Reliability was assessed by comparing the 12-week questionnaire with a cost diary which patients were asked to fill in prospectively during the first 4 weeks after discharge. RESULTS: The 3-month questionnaire showed a response rate of 88%. Ninety two percent of respondents found the questionnaire easy or very easy to fill in. Rate of completion was close to 100% for all items. Time for completion took on average 27 minutes. Comparison with the data collected by the prospective cost diary showed modest to good correlation for the overlapping period. Intraclass correlation coefficients ranged from 0.57 (cost of daily drug intake) to 0.9 (hospital days). CONCLUSIONS: The instrument showed good acceptability and feasibility as well as reasonable reliability when compared to a detailed prospective cost diary. Therefore the instrument appears to be an efficient alternative for patient oriented cost measurement. With respect to reliability further suggestions for improvement of the instrument were developed where indicated.

**PCV32**

**THE USE OF STATINS IN SECONDARY CARE: EVIDENCE FROM ACTUAL PRACTICE DATA**

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OBJECTIVE: To perform a pharmacoepidemiologic analysis on the utilization and cost of statins in secondary care practice in non-experimental setting. METHODS: The Ravenna Local Health Unit administrative database (approximately 350,000 subjects) was used to perform a registry of Acute Myocardial Infarction (AMI) since 1996. The registry was made by the linkages among patients’ baseline characteristics, hospital admissions and drug prescriptions. A 6-month follow-up study included all subjects discharged alive from the hospital after AMI during the period 1996–2000. Patients with previous AMI since 1991 and those not in the province’s databases for the entire follow-up were excluded. Drug prescriptions data were processed for statins (ATC Code C10A), ACE-inhibitors (C09A even if associated with C09B), beta-blockers (C07), other antihypertensives (C02, C03, C08, C09C and C09D), as well as for aspirin (B01AC06), antidiabetic drugs (A10A and A10B), cardiac drugs (C01) and other antiaggregants (B01AA and B01AB, B01AC05). Drug cost was evaluated at NHS purchase prices. RESULTS: A total of 2265 subjects were enrolled (446 in 1996, 440 in 1997, 443 in 1998, 443 in 1999, and 493 in 2000). The percentage of patients prescribed for statins increased each year (from 22.6% in 1996 to 43.8% in 2000) as well as the percentage of those prescribed for aspirin (from 48.0% in 1996 to 80.5% in 2000) and beta-blockers (from 27.4% in 1996 to 41.0% in 2000). Overall cost for statins accounted to €10,610 in 1996, €15,344 in 1997, €23,483 in 1998, €35,910 in 1999, and €45,103 in 2000. Average cost for patients pre-

**PCV33**

**COST-EFFECTIVENESS OF METHODS TO QUIT SMOKING IN FINNISH HEALTH CARE**

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OBJECTIVES: The Finnish Health For All 2000 target set in the mid-1980s (at least 80% non-smoking) was not realised. Actually, prevalence of smoking has remained rather constant during the 1990s even after introduction of over-the-counter nicotine replacement (NRT) options. Our intent was to model cost-effectiveness of six methods (willpower, physician advice, NRT [patch, gum, spray], bupropion) to quit smoking as applied in Finnish health care. METHODS: Data on efficacy (% successfully quit smoking during 12 months’ observation period) were obtained from published meta-analyses and original articles. Cost data included only direct costs (physician visits, medications, adverse events [occurrence 1% in each treatment]). Costs were estimated using societal perspective (in year 2000 Euros). Decision-tree based average cost-effectiveness estimates ($/additional quitter) and incremental cost-effectiveness ratios (ICER) were derived by using Data 3.5 software. Two-way sensitivity analyses were performed. RESULTS: Efficacy of willpower (1%) and physician advice (3%) were the lowest, followed by NRT patch (13%) and NRT gum (18%) whereas higher for NRT spray (24%) and bupropion (30%). Costs of willpower were set to zero by definition. Cost per additional quitter of bupropion ($954) treatment was the lowest, and NRT spray ($2397) the highest. Bupropion dominated over NRT gum and spray. ICER of NRT patch vs. physician advice was €1495 ($804 for bupropion) whereas ICER of bupropion vs. NRT patch was €404. Sensitivity analyses showed results were robust. CONCLUSIONS: Short-term decision-tree analysis suggests that bupropion is a cost-effective option for physicians in order to help motivated smokers to quit smoking in Finnish health care settings.

**PCV34**

**COST-EFFECTIVENESS OF PATHOGEN INACTIVATION FOR PLATELET TRANSFUSIONS IN DUTCH CARDIAC SURGERY**

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