OBJECTIVE: To assess the cost-effectiveness of rosuvastatin in comparison with simvasstatin and atorvastatin for the treatment of hypercholesterolemia in daily practice in the Netherlands. METHODS: A cohort of statin users was selected from the PHARMO database. Information on cholesterol and medical resource utilization was obtained from a clinical lab database. Information on treatment patterns was obtained from GPs. Effectiveness in daily practice, defined as change in cholesterol level, and achieving the NCEP ATP-II guideline was assessed at 3, 12, and 24 months. The ratio between efficacy from clinical trials and effectiveness in daily practice for simvastatin and atorvastatin combined with the efficacy of rosuvastatin was used to estimate the effectiveness of rosuvastatin in daily practice. With bootstrapping the cost-effectiveness of rosuvastatin was estimated. RESULTS: In daily practice it is expected that rosuvastatin results in a larger reduction in total cholesterol and LDL-cholesterol, and a higher probability of achieving the NCEP ATP-II guidelines than simvastatin and atorvastatin. For diabetes or arteriosclerosis patients the difference in predicted effectiveness was greater: The probability of achieving the LDL-cholesterol threshold for rosuvastatin was 63.9% (95% CI 46.5; 81.3), for simvastatin 37.1% (95% CI 29.8; 46.0), and for atorvastatin 41.9% (95% CI 28.0; 62.5). Total medical costs from the insurance perspective were €1,471 for rosuvastatin, €1,850 for simvastatin, and €1,562 for atorvastatin over a 2-year period. The probability that rosuvastatin is dominant over simvastatin is more than 90%. The probability that rosuvastatin is cost-effective in comparison to atorvastatin varies between 60% and 80% depending on outcome, willingness to pay, and risk profile. CONCLUSION: It is expected that rosuvastatin in comparison to simvastatin saves costs in combination with a greater effectiveness in routine daily practice. The results indicate that rosuvastatin is also cost-effective in comparison with atorvastatin. A greater benefit was observed for patients with diabetes and arteriosclerosis treated with rosuvastatin.

OBJECTIVES: Recent pharmacologic advances in perioperative sedation and analgesia have enabled the early extubation or “fast-tracking” of patients following cardiac surgery in the intensive care unit (ICU). The clinical and economic implications associated with these sedation/analgesia protocols in practice, however, remain unclear. We prospectively assessed the total costs of care and length of stay associated with three sedation/analgesia protocols for use in technology assessment of alternative management strategies. METHODS: A total of 113 cardiac surgery patients were randomized to receive in a double-blind manner either: propofol infusion with morphine bolus (Group P, n = 41); fentanyl infusion with midazolam (Group F, n = 34); or combined propofol and fentanyl infusion (Group PF, n = 38) for sedation and analgesia during intubation. We tracked resource utilization in administrative data to estimate ICU-related pharmacy costs, physician costs, hospital costs, total direct medical costs, and length of stay. Standardized, nationally representative cost estimates were used to value resource utilization in 2002 constant dollars. We used analysis of variance methods (ANOVA) to determine whether observed economic outcomes differed between sedation protocols. RESULTS: Mean observed ICU-related length of stay (days) was similar overall between groups (Group P: 1.14; Group F: 1.10; Group PF: 1.26; p = 0.630) as were average total medical costs ($21,338 vs. $20,208 vs. $20,148, respectively; p = 0.466). Mean pharmacy, physician, and hospital costs also did not significantly differ between groups (pharmacy costs: $1304 vs. $1302 vs. $1280, respectively; p = 0.976). Pair-wise comparisons between sedation approaches also did not reveal any significant difference in economic outcomes between management protocols. CONCLUSIONS: There is no evidence of significantly reduced length of stay or total costs associated with propofol-based sedation/analgesia protocols in practice. Additional research is warranted to assess clinical outcomes associated with these agents to guide clinical practice decision-making.

OBJECTIVES: This model compares four statins (rosuvastatin, atorvastatin, simvastatin and pravastatin) in their costs and effectiveness of primary prevention for Coronary Heart Disease (CHD). The use of models are increasingly accepted to determine the cost-effectiveness of products. METHODS: A quasi-Markov model was used to simulate the life-time experience of CHD events (angina, Myocardial Infarction (MI), Cardio Vascular Disease (CVD), death) for cohorts of patients classified by age, gender, cholesterol level and risk factors. The Framingham Risk Equations were used to calculate the
OBJECTIVE: To determine the cost effectiveness of antihypertensive therapy in diabetic patients in Italy, as it is both less costly and more effective.

RESULTS: The incremental life years saved for rosvuastatin, atorvastatin, simvastatin, and pravastatin compared to no treatment for a 55-year-old male were 0.40, 0.33, 0.32, and 0.26 respectively. The associated incremental costs were £2844, £2856, £3107, and £3889. Rosuvastatin dominated the three other statins in the primary prevention of CHD, for all ages and all cholesterol levels. Sensitivity analysis confirmed the results. CONCLUSIONS: In this quasi-Markov model, rosuvastatin was shown to be more cost-effective for the primary prevention of CHD events than atorvastatin, simvastatin, and pravastatin.

ECONOMIC IMPACT OF SELECTED FIXED-COMBINATION ANGIOTENSIN-CONVERTING ENZYME INHIBITOR/CALCIUM CHANNEL BLOCKER ANTI-HYPERTENSIVES AMONG PATIENTS WITH DIABETES

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OBJECTIVES: Certain combination anti-hypertensives vary in their levels of potentially adverse metabolic effects in patients with comorbid diabetes. We examined the characteristics of patients initiating combination therapy and the effects of treatment choice on direct medical costs, using integrated medical and pharmacy claims data.

METHODS: Patients with prior evidence of diabetes who were newly-treated for hypertension from January 1998 to March 2002 and continuously enrolled for at least 6 months before and after therapy initiation were selected. Patients were stratified by initial fixed combination treatment (trandolapril/verapamil [TV] vs. benazepril/amlodipine [BA]). One-year costs of care were examined following initiation of therapy; costs were categorized as cardiovascular-related and all other-related care. 95% confidence intervals for cost differences were calculated using nonparametric bootstrapping techniques. RESULTS: The mean age of the sample (n = 174) was 53 years; 47% were female. 22%, 6%, 6%, and 3% of patients had comorbid diagnoses of hyperlipidemia, cardiac arrhythmias, other ischemic heart disease, and myocardial infarction respectively during pre-treatment. Patients in the TV group had lower cardiovascular-related costs as compared to the BA group ($2311 vs. $2570, mean difference: $259, 95% CI [$2730, $1438]). Differences in cardiovascular-related cost were manifested primarily in the cardiovascular-related inpatient cost ($615 vs. $1,209 for TV and BA, respectively, mean difference: $594, 95% CI [$2900, $823]). All other-related costs were considerably lower in the TV group ($5006 vs. $6404, mean difference: $1397, 95% CI [$949, $3669]). Patients in the TV group ($7,317) had lower overall costs as compared to the BA group ($8,974; mean difference $1,656, 95% CI [$12,657, $4,735]).

CONCLUSIONS: Use of fixed combination trandolapril/verapamil therapy among patients with diabetes is associated with reduced direct medical costs in comparison to combination benazepril/amlodipine.