

PCVI5

ATRIAL VERSUS DUAL CHAMBER PACING IN SINUS NODE DISEASE

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OBJECTIVES: Sinus Node Disease (SND) is a very common indication for cardiac pacemakers. In most cases patients have dual-chamber (DDD) pacing systems implanted. Recent studies showed benefits of atrial pacing (AAI) rather than DDD. Not infrequently subsequent atrioventricular block develops and upgrade of AAI to DDD is necessary, what creates additional costs. The aim: to compare costs of primary DDD pacemaker implantation to primary AAI implantation, in patients without initial DDD indications. **METHODS:** The cost comparison analysis was based on deterministic model in the time window of 10 years. Model assumptions: pacemaker battery longevity: AAI—8 y.; DDD—6 y. The rate of upgrade necessity was taken from the observation of 752 SND patients who had AAI implanted between 1993 and 1997. Records of patients were examined to find cases requiring further upgrade procedure. The rate of upgrade to DDD was 19.1% within a mean observational period 7.4 years. Perspective: public health care payer. Linear costs depreciation; 5% discount rate. Sensitivity analysis: for upgrade to DDD rate and procedure costs. **RESULTS:** Projected to 10 years rate of upgrade was 25.8%. Cost of primary DDD approach was \$4719 PPP; primary AAI approach—\$3804 PPP; cost of hypothetical (ideal) approach in which all patients that would need upgrade in the future were identified before implantation was \$3505 PPP. Primary DDD would become equal to primary AAI strategy if upgrade rate was 56% or more. The lower relative DDD costs the lower was the equality upgrade rate, and the higher absolute differences the more beneficial was AAI strategy. **CONCLUSIONS:** Implantation of AAI PM in SND patients without DDD indications is cost saving comparing to DDD in every patient. Better identification of patients who will need upgrade to DDD may bring additional savings.

PCVI6

ROSUVASTATIN IS MORE COST-EFFECTIVE COMPARED TO ATORVASTATIN AND SIMVASTATIN FOR HYPERLIPIDEMIA MANAGEMENT IN HIGH-RISK PATIENTS IN ROUTINE CLINICAL PRACTICE

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OBJECTIVE: To assess the cost-effectiveness (CE) of rosuvastatin compared to atorvastatin and simvastatin in high-risk patients in routine clinical practice. **METHODS:** Medical charts of 24,225 patients with Coronary Heart Disease (or its equivalent) were reviewed at 500 physician offices in the Midwest. Patients between the ages of 18 and 79 years who initiated either atorvastatin, rosuvastatin or simvastatin treatment; and had a lipid panel within 90 days before and 4 weeks after initiating statin therapy were included in the study. Effectiveness [reduction in low density lipoprotein cholesterol (LDL-C) and achievement of National Cholesterol Educational Program Adult Treatment Panel III LDL-C goal] estimates were derived using

multivariate approach. Annual direct medical costs [wholesale acquisition cost of statins and titration] were included. A decision analytic CE model, from payer perspective, was constructed to compute incremental cost effectiveness ratios (ICERs) in terms of incremental cost/incremental percent change in LDL-C and incremental cost/incremental percent of patients reaching goal for rosuvastatin compared to atorvastatin and simvastatin. **RESULTS:** Rosuvastatin patients (n = 63) were slightly younger and had higher baseline LDL-C, than either atorvastatin (n = 480) or simvastatin (n = 232) patients. In the base case analysis, rosuvastatin had lowest overall annualized cost followed by atorvastatin and simvastatin. Using adjusted effectiveness estimates, as compared to atorvastatin and simvastatin, rosuvastatin had the lowest cost/LDL-C reduction (\$33.27 and \$55.43 vs. \$23.9, respectively), and cost/LDL-C goal attainment (\$1708 and \$2893 vs. \$1260, respectively). Incremental CE analysis indicated that rosuvastatin dominated both atorvastatin and simvastatin. A significant reduction in price of simvastatin was required to attain the same level of CE as rosuvastatin. Results were most sensitive to acquisition costs of statins. **CONCLUSION:** Rosuvastatin is cost-effective as compared to atorvastatin and simvastatin in terms of cost per LDL-C reduction, and cost per patient reaching goal in managing hyperlipidemia among high-risk patients in routine clinical practice.

PCVI7

DECISION ANALYSIS TO COMPARE THE COST-EFFECTIVENESS OF THE STATINS AVAILABLE BY PRESCRIPTION VERSUS OVER THE COUNTER BASED FROM A SOCIETAL PERSPECTIVE

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OBJECTIVES: A decision analysis model was developed to evaluate the cost-effectiveness of statins available by prescription (Rx) versus over-the-counter (OTC) from a societal perspective. **METHODS:** Beginning with a deterministic baseline of average costs and effectiveness of statin drugs available in the U.S., a decision tree model was constructed to estimate the cost-effectiveness comparing the statins available by Rx and OTC. We used decision analysis methods to determine the cost-effectiveness ratios (CERs) of Rx versus OTC strategies for the cholesterol lowering statins from a US societal perspective. Sensitivity analysis was performed on the CERs to examine the various assumptions pertaining to the potential variability of key variables. **RESULTS:** Given the baseline assumptions in the model, it was found that OTC statins were more cost-effective as compared to the prescription statins. Comparing different statin agents, it was observed that OTC rosuvastatin was the most cost-effective cholesterol lowering drug among the available statins in the US market. The projections estimated that all the available statin agents were dominated by rosuvastatin. Rosuvastatin had a baseline total annual average health care cost of \$1292 (Rx) and \$1242 (OTC) and an average LDL reduction of 54%. The average costs for all lipid lowering statin therapies were \$1356 (Rx) and \$1306 (OTC) and CERs were observed as \$3277 (OTC) versus \$3405 (Rx). **CONCLUSIONS:** The better CERs of OTC statin therapy were found to be stable over a wide variety of assumptions about drug efficacy and costs. To attain the potential benefits and improve clinical outcomes suggested in this economic decision model, it would be necessary to provide adequate knowledge to the patients regarding cholesterol level testing and monitor potential increases in adverse drug events. OTC statins would potentially increase therapy access to a larger population, necessitating the need for appropriate self-monitoring and therapy management.