effectiveness literature. METHODS: A literature search was conducted in MEDLINE to identify the published articles on HF from 1993 to 2007 with a focus on economic evaluations and resource use. Six review articles were found which summarized 31 economic studies for ACE inhibitors, beta-blockers and digoxin through 2004. None of the review articles had summarized the studies for ARBs, aldosterone receptor blockers, or evidence from real-world studies. RESULTS: After excluding studies summarized in the previous review papers, we found 29 new economic analyses for drugs used to treat HF. Among these, 22 studies were based on data available from clinical trials. These included 14 cost-effectiveness analyses (CEA), 1 CEA/cost-utility analysis, 1 CEA/cost-consequence analysis, 4 CEA/cost-benefit analyses (CBA), 1 CBA and 1 budget impact analysis. The remaining analyses were studies conducted using real-world data. Five studies compared ARBs to placebos or ACE inhibitors, out of which four suggested cost-savings or cost-effectiveness for ARBs, and one showed higher costs for ARBs. For the remaining drugs, evidence that treatment was cost-saving was observed in 16 studies and that the treatment had favorable cost-effectiveness ratio was observed in 7 studies. Finally, one study comparing costs among beta-blockers found bisoprolol to be the most cost-effective drug. CONCLUSION: Economic studies analyzing drugs used to treat HF can help in making rational decisions regarding provision of care. However, there is need of more comparative economic studies between same class drugs to inform prescription drug decisions.

PCV28

CARDIOVASCULAR EVENT DRIVEN ECONOMIC ANALYSIS OF ROSUVASTATIN VERSUS SIMVASTATIN USING PRAGMATIC HEAD-TO-HEAD RCTS WITH SURROGATE END-POINT MEASURES

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OBJECTIVE: Evidence demonstrates a strong association between reductions in LDL-C achieved with statin therapy and reductions in cardiovascular events. Several cost-effectiveness analyses have incorporated LDL-C reduction, which is a “surrogate endpoint”, as indicator for effectiveness of interventions in their models. Interpretations of cost-effectiveness analyses with surrogate endpoints may confuse decision-makers. Therefore, clinically important endpoints (hard endpoints) such as cardiovascular events may be a better alternative to comprehend the magnitude of the cost-effectiveness of therapeutics. The objective is to estimate cost savings through cardiovascular event reduction correlated with LDL-C reduction in patients with hypercholesterolemia on statin therapy using pragmatic head-to-head RCTs from a Canadian perspective. METHODS: Reducing LDL-C was incorporated into an economic analysis through a reduction in cardiovascular (cardiac and cerebrovascular) events. Data for LDL-C reduction from a head-to-head RCT [Am Heart J 2002;144:1036–43]; rosuvastatin (starting 5 mg) versus simvastatin (starting 20 mg) with up-titration doses; and distribution of cardiovascular risk for users [N = 100,000, 5 years] in Canadian population [Clin Invest Med 2007;30:E63–E69]. Medical costs are from the perspective of the Canadian health care system. RESULTS: It is estimated that approximate acquisition costs for simvastatin is more than $14 million less than acquisition costs for rosuvastatin. Health care cost-savings through cardiovascular events prevention related to statin therapy are estimated as follows: Non-fatal myocardial infarction, rosuvastatin ($97,488,572) and simvastatin ($88,068,070); ischemic stroke, rosuvastatin ($63,178,674) and simvastatin ($57,085,510). Rosuvastatin saves almost $15.5 (95%CI: $14.8, $16.2) million compared to simvastatin due to cardiovascular events reduction. Rosuvastatin and simvastatin can prevent 3161 and 2857 deaths, respectively. CONCLUSION: Although the acquisition cost for simvastatin is much less than that for rosuvastatin, the economic benefits of dyslipidemia management with rosuvastatin in the Canadian population is estimated to be significantly superior to simvastatin therapy through a reduction in costs associated with the management of cardiovascular events and sequelae.

PCV29

A COST-EFFECTIVENESS ANALYSIS OF TREATMENT TO LOW-DENSITY LIPOPROTEIN (LDL) CHOLESTEROL GOAL IN HIGH-RISK PATIENTS BASED UPON THE 2004 NATIONAL CHOLESTEROL EDUCATION PROGRAM (NCEP) GUIDELINE UPDATE

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OBJECTIVE: To assess the cost-effectiveness of LDL cholesterol reduction based upon the 2004 NCEP guideline update for atorvastatin, lovastatin, rosuvastatin, simvastatin, atorvastatin plus ezetimibe, lovastatin plus extended-release niacin, and simvastatin plus ezetimibe from a third-party payer’s perspective. METHODS: Literature-based decision analyses were conducted to evaluate direct costs, treatment outcomes defined as LDL goals of <70 and <100 mg/dl, and clinically-significant adverse events. Each of the decision trees consisted of four initial monotherapy treatment arms and also considered combination therapy versus dose titration if treatment goals were not achieved. Base cases were defined according to NCEP high-risk patient classifications and five categories of baseline LDL levels from the 1999–2002 National Health and Nutrition Examination Survey (NHANES). Meta-analyses were performed to estimate percent LDL reductions for each agent and for each dose. Monte Carlo simulations and probabilistic sensitivity analyses were used to yield incremental cost-effectiveness ratios, confidence intervals, and graphical representations of findings. One-way sensitivity analyses were conducted on key variables of uncertainty and costs. RESULTS: Overall, costs were observed to higher and effectiveness lower among patients seeking a <70 mg/dl goal. Simvastatin was found to be the most cost-effective treatment option for both <70 mg/dl and <100 mg/dl goals and for each baseline LDL cholesterol strata. Combination therapy was more cost-effective compared to dose titration among the <70 mg/dl goal and in those requiring LDL reductions above 45%. Analyses indicated that the recent generic pricing of simvastatin substantially impacted results. CONCLUSION: From a third-party payer perspective and among high-risk patients, simvastatin (including monotherapy and combination with ezetimibe), was observed to be the most cost-effective treatment option for LDL treatment goals of <70 and <100 mg/dl. Further research is warranted concerning combination therapies and in evaluating additional surrogate outcomes such as high-density lipoprotein (HDL).

PCV30

CLOPIDOGREL IS COST-EFFECTIVE COMPARED WITH ASPIRIN IN UNITED KINGDOM PATIENTS WITH A MYOCARDIAL INFARCTION WHO SUBSEQUENTLY SUSTAIN AN ISCHAEMIC STROKE OR PERIPHERAL ARTERIAL DISEASE EVENT

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OBJECTIVE: The REACH Registry shows that the rate of death, myocardial infarctions (MI) and ischaemic strokes (IS) increase

PCV28