parametric data. OLS regression tested the relationship between duration of therapy and presence of CHD risk factors. RESULTS: For each statin, days on therapy differed significantly (p < 0.001) by the number of risk factors. The number of CHD risk factors was positively significant in predicting duration of therapy (p < 0.0001) in both new and continuing therapy. Duration of therapy associated with an increase of 48 days for each risk factor for new patients and 58 days for continuing patients. CONCLUSIONS: Number of CHD risk factors is positively correlated with length of therapy when using statins as lipid lowering therapy for new and continuing patients.

### PCV16

**CARING FOR HYPERTENSION ON INITIATION: COSTS AND EFFECTIVENESS (CHOICE). DESIGN AND RATIONALE OF A NATURALISTIC STUDY**

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**INTRODUCTION:** Naturalistic studies are essential to prospectively study real-world antihypertensive treatment. OBJECTIVE: to evaluate the feasibility of performing a naturalistic study in newly diagnosed hypertensives in terms of enrollment, adequacy, timeliness of data collection, and study procedures. METHODS: CHOICE prospectively collected actual practice data on the treatment of newly-diagnosed hypertensive patients. Initial therapy was randomly assigned to either Group 1 (beta blockers or diuretics) or Group 2 (ACE inhibitors or calcium channel blockers). The protocol made no demands in scheduling visits or changing treatment during follow-up. Physicians were blind to study purpose and hypotheses. Only a final visit at 5 ± 1 months, if none occurred naturally, was mandated. Direct involvement of the CHOICE study team was minimized using a Remote Monitoring System to collect data and communicate with study sites. RESULTS: Within 30 weeks, a total of 55 physicians enrolled 512 patients with a mean age of 51 years and blood pressure of 158/99 mmHG. In all, 46 different antihypertensive medications were prescribed and 2,554 office visits (range = 1–16 visits per patient) were attended. Other medical resource use was low during the study period. A final, clean database was ready for analysis 30 days after last patient last visit. CONCLUSIONS: It has been demonstrated that CHOICE is a feasible framework to study the real-world effectiveness of initial therapy for newly diagnosed hypertension. Protocol flexibility and a novel electronic data entry system are core elements of this naturalistic design.

### PCV17

**A PHARMACOECONOMIC MODEL TO EVALUATE TREATMENT OPTIONS FOR DVT PHARMACOPROPHYLAXIS**

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Economic analysis of various treatment modalities used to prevent deep vein thrombosis (DVT) in various medical and surgical at-risk patients has been limited by lack of consistent and representative methods to evaluate various resource costs attributed to both the prevention of DVT and the diagnosis and treatment of prophylaxis failures. OBJECTIVE: To develop a systematic and comprehensive method to identify and prioritize all direct costs associated with DVT prophylaxis. METHODS: A decision tree was developed to identify and prioritize all medical, surgical and diagnostic procedures that contribute to overall direct cost. Included were costs of prophylaxis, cost of diagnosing a prophylaxis failure (a DVT) and costs of major complications of this therapy (pulmonary embolism, major bleeding and thrombocytopenia.) Diagnostic procedures were also prioritized clinically as either a “standard”, “alternative or confirmatory”, or “supplemental” procedure. This prioritization allows for probability multipliers to be assigned to each category of diagnostic procedures in order to get a weighted average of the cost of this procedure. Likewise, the various costs associated with prophylaxis failure were prioritized. Next a spreadsheet was developed to match this decision tree. This spreadsheet contained all identified resource costs shown on the decision tree and indicated the quantity or units of each resource that are typically used. Lastly, the corresponding CPT and ICD9 codes for all resources were identified. RESULTS: Major categories of resources identified include diagnostic, treatment, and monitoring. These 3 areas are divided into 13 sub-categories which in turn include over 60 specifically identified cost related resources. CONCLUSION: This model allows any institution to accurately identify, prioritize and analyze institution specific resource costs instead of using literature values to determine the cost-benefit of various pharmacoprophylactic regimens including unfractionated heparin and various low molecular weight heparins used at their site.

### PCV18

**CHOLESTEROL REDUCTION SUCCESS RATES AND RESOURCE UTILIZATION BY GENDER**

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Abstracts
OBJECTIVE: To assess relative success rates and resource utilization differences between males and females treated to NCEP and EAS cholesterol goals with HMG-CoA reductase inhibitors. METHODS: In three open-label clinical trials in the US and Europe, 998 patients (375 females and 623 males) with a CHD risk factor, documented CHD and/or PVD, were randomized to receive one of five HMG-CoA reductase inhibitors (atorvastatin, fluvastatin, lovastatin, pravastatin, or simvastatin). Physician visits occurred every 6 weeks and dose titrations (either increased statin dose, or the addition of cholestyramine) were made every 12 weeks if target LDL-C concentration levels were not achieved. The analysis takes a third party perspective by using insurance payment rates for study medications, physician visits, add-on therapies and treatments for adverse events, all denominated in 1997 US dollars. RESULTS: NCEP or EAS LDL-C targets were achieved with similar frequency by males (75.7%) and females (74.7%). Accordingly, resource utilization was similar for males and females. Mean total costs were similar for all males ($1529.94) and females ($1470.99, p = 0.776); males ($1280.62) and females ($1252.95, p = 0.665) reaching goal and males ($2306.32) and females ($2115.59, p = 0.103) not reaching goal. Finally, mean total costs for males and females (and respective percentages achieving LDL-C targets) were similar among study medications: atorvastatin $1044.49 (88.2%) and $1020.29 (90.7%); fluvastatin $1815.03 (58.4%) and $1709.72 (55.5%); lovastatin $2031.78 (77.9%) and $2045.43 (80.3%); pravastatin $1878.90 (53.6%) and $1776.19 (35.7%) and simvastatin $1475.48 (80.3%) and $1293.43 (77.0%). CONCLUSIONS: Successes in achieving LDL-C targets and resource utilization were independent of gender. However the ability to reach target LDL-C, by use of specific study medications, significantly impacts the total cost of cholesterol reduction.

ECONOMIC OUTCOMES OF PATIENTS RECEIVING CARVEDILOL COMPARED TO THOSE RECEIVING NO BETA-BLOCKER THERAPY FOR THE TREATMENT OF CONGESTIVE HEART FAILURE IN A MANAGED CARE ORGANIZATION

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Considerable clinical trial data is available to support the use of beta-blockers for the treatment of congestive heart failure (CHF). OBJECTIVES: The primary objective is to compare differences in health care costs (pharmacy, medical, and total) between patients receiving carvedilol and those not receiving a beta-blocker for the treatment of CHF. The secondary objective is to determine differences among cohorts with respect to CHF-related costs and total health care costs (CHF and non-CHF related).

METHODS: Retrospective claims data from a large managed care organization were analyzed. Patients were included if they had an ICD-9 diagnosis code for CHF between 1/1/97 and 12/31/99, received an ACE inhibitor and a diuretic, were continuously eligible, and at least 18 years old. The carvedilol group was newly started on carvedilol and did not receive another beta-blocker. The non beta-blocker group did not receive any beta-blockers and had no contraindications to beta-blocker therapy. All patients were followed for 1 year. Total health care costs include costs for all services covered. CHF-related costs include those directly related to the treatment of CHF. RESULTS: There were a total of 9,439 patients, 52.3% were female, and the average age was 77 (S.D. = 9.5) years. Total cost (CHF and non-CHF related) were measured after adjusting for age, gender, pre-total cost, and Charlson Comorbidity Index. Patients in the carvedilol group had higher pharmacy cost ($2,586 versus $1,343, P < .0001), lower medical cost ($18,196 versus $22,168, P = 0.362), and lower total cost ($20,782 versus $23,511, P = 0.619). When measuring only CHF-related costs, patients in the carvedilol group had higher pharmacy cost ($1,489 versus $416, P < .0001), lower medical cost ($2,232 versus $3,105, P = 0.450), and slightly higher total cost ($3,721 versus $3,521, P = 0.959). CONCLUSION: The higher pharmacy cost of carvedilol use appears to be offset by a reduction in total (CHF and non-CHF related) medical cost.

COST-EFFECTIVENESS MODEL OF THROMBOLYTIC THERAPY FOR ACUTE MYOCARDIAL INFARCTION

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OBJECTIVE: To conduct a cost-effectiveness analysis of tissue-Plasminogen Activator (t-PA) versus Streptokinase (SK) for treating acute myocardial infarction (AMI). PERSPECTIVE: Societal. DATA SOURCES: The cost, clinical outcomes and utilities were obtained from literature. METHODS: Decision analytical model was used to evaluate the short and long-term outcomes and costs associated with the use of SK or t-PA for AMI. Clinical benefit is expressed as Quality Adjusted Life Years (QALY) resulting from the treatment. Patients presenting within six hours after onset of symptoms, with a certain probability of death may be treated with SK or t-PA. Survivors may either get a disabling stroke or no stroke, patients with no disabling stroke may or may not have a reinfarction. Inpatient and long-term costs of coronary disease and disabling stroke were included. Costs and QALYs were discounted at 3%. Expected costs and QALYs yielded the Incremental Cost-effectiveness Ratio (ICER). Sensitivity analyses were performed on important factors. OUTCOMES: QALY which incorporated 30 days mortality, impacts of disabling stroke, reinfarction. Short-term and