PCV18

ECONOMIC EVALUATION OF ORAL THERAPIES FOR PULMONARY ARTERIAL HYPERTENSION

Harnett J[1], Van Engen A[2], Schoeman O[2]
[1]Pfizer Inc, New York, NY, USA, [2]Quintiles Consulting, Hoofddorp, The Netherlands

OBJECTIVES: The objective of this study was to create an economic model for evaluation of two oral therapies for pulmonary arterial hypertension (PAH) in the US. **METHODS:** Using a Markov model, expected outcomes and costs for PAH patients treated with either Revatio™ (sildenafil citrate) or Tracleer™ (bosentan) were evaluated over a 1 year period. The health states in the model were based on the World Health Organization functional class I to IV and death. Transition probabilities and utilities were based on the results of the SUPER-1 clinical trial for Revatio™. Treatment effect was estimated using relative risk of improvement in 6-minute walk tests for sildenafil and bosentan based on pivotal clinical trials. Costs were derived from average wholesaler price and Medicare reimbursement data. Sensitivity analyses were performed in order to test the strength of the conclusions of the analysis over a range of structural assumptions, probability estimates and value judgments. **RESULTS:** Sildenafil therapy was associated with significant cost savings ($3.0 million per 100 patients per year) in comparison with bosentan. Life-year and QALY differences between sildenafil and bosentan were found to be negligible. **CONCLUSIONS:** The results show that sildenafil is more cost-effective than bosentan mainly due to the large difference in medication costs (in favor of sildenafil).

PCV19

ONE-YEAR COSTS FOR ACUTE CORONARY SYNDROME IN PATIENTS WITH AND WITHOUT REVASCULARIZATION DURING THE INITIAL HOSPITALIZATION

Sidney S[1], Sorel M[1], Quesenberry Jr CP[1], McCollam PL[2]
[1]Kaiser Permanente Medical Care Program, Oakland, CA, USA, [2]Eli Lilly and Company, Indianapolis, IN, USA

OBJECTIVES: Revascularization procedures are often carried out during hospitalizations for acute coronary syndrome (ACS). Our objectives are to estimate the costs during the first year of follow-up after initial (index) hospitalization for ACS stratified by whether or not revascularization took place at this hospitalization. **METHODS:** This consisted of Kaiser Permanente Medical Care Program Nothern California patients age >40 years, and hospitalized with ACS during January 1, 1999 to December 31, 2000, and without ACS hospitalization during 6 months prior. Costs expressed are those incurred by the health plan. **RESULTS:** A total of 14,852 patients met inclusion criteria. Mean age was 67.2 years; 63.9% were male. The distribution of revascularization during index hospitalization was 2457 CABG (16.5%), 3257 PCI (21.9%), and 9138 no procedure (61.5%). Index total hospitalization costs were: CABG ($34,307 + 26,515), PCI ($14,863 + $11,665), no procedure ($11,059 + 16,497). One-year follow-up costs were highest for no procedure [$17,669 + 32,510 ($7,781 median)], intermediate for CABG [$12,763 + 22,676 ($5,670)] lowest for PCI [$12,297 + 22,197 ($4,336)]. Percent of total costs by type of resource used (clinic, hospital, pharmacy, respectively) were for CABG 36.5%, 45.3%, 9.2%, for PCI 30.1%, 57.5%, 10.4%, and for no procedure 24.3%, 62.6%, and 7.5%. As expected, follow-up costs were considerably impacted by whether or not revascularization was performed. One-year revascularization rates were 15.0% for the PCI group, 14.3% for no procedure, and only 2.2% for CABG. One-year mean follow-up costs with and without revascularization were: CABG ($28,867 with and $12,401 without revascu-

larization), PCI ($34,673 with and $8,344 without revascularization), no procedure ($39,476 with and $14,020 without revascularization). **CONCLUSIONS:** While hospitalization for ACS with revascularization procedure was associated with higher costs than hospitalization with no procedure, one-year follow-up costs were higher in the no procedure group, largely due to higher hospitalization costs.

PCV20

MARKOV-BASED ECONOMIC ANALYSIS OF NESIRITIDE IN ACUTE DECOMPENSATED HEART FAILURE

Blackburn JC[1], DiDomenico R[1], Hilleman DE[2], Schumock GT[1], Walton SM[1]
[1]University of Illinois at Chicago, Chicago, IL, USA, [2]Creighton University, Omaha, NE, USA

OBJECTIVES: Acute decompensated heart failure (ADHF) leads to frequent hospital admissions and mortality; and represents a significant economic burden to patients, providers, and society. Nesiritide may reduce downstream resource utilization and improve patient outcomes when used early in the treatment. **METHODS:** A Monte Carlo simulation for a hypothetical cohort of 10,000 patients, based on a Markov model, was used to estimate from the hospital perspective the expected values of outcomes of interest. The model incorporates complications of therapy (atrial fibrillation and renal failure), location of inpatient care (intensive care unit, inpatient ward, or emergency department only), and hospital readmissions. Three stages of disease were included within each cycle of the model: well (survive ADHF hospitalization without suffering ADHF readmission), sick (survive ADHF hospitalization but suffer ADHF readmission), and death. Transition probabilities were calculated from prior published clinical trials. Hospital costs were obtained from a pilot study conducted at Creighton University Medical Center. The model was run over six cycles of one month each. **RESULTS:** Based on the results of the Monte Carlo simulation, nesiritide was dominant over standard therapy because it both reduces costs and leads to a greater life expectancy. The average hospital costs per patient treated with nesiritide and standard therapy were $9856 (SD ± $4676) and $10,953 (SD ± $5573) respectively. Cost differences were mostly attributable to a lower probability of readmission for patients receiving nesiritide. The percentage of patients who required 2 or more readmissions in the nesiritide and in the standard therapy group were 25% and 31% respectively. Survival at six months also favored nesiritide. **CONCLUSIONS:** Our model predicts that nesiritide, given within 24 hours of hospitalization for ADHF, would lead to a reduction in overall costs and the number of total readmissions, and may decrease mortality over 6 months compared to standard therapy.

PCV21

COSTS OF DIAGNOSTIC PROCEDURES OF INTERVENTIONIST CARDIOLOGY IN THE SOCIAL SECURITY MEXICAN INSTITUTE (IMSS)

Mould J[1], Salinas-Escudero G[1], Martinez-Valverde S[2], Garduño-Espinosa J[1], Duran-Arenas L[1]
[1]Social Security Mexican Institute, Mexico City, Mexico, [2]Social Security Research Unit, Mexico City, Mexico

OBJECTIVES: An efficient assignation of resources in the service of hemodinamy requires the knowledge of costs of possible diagnostic procedure's combinations. Currently, in Mexico the costs for these procedures are very general and incomplete. The objective of this study was to estimate the direct and indirect medical cost of different interventionist cardiology diagnostic procedures