POSTER SESSION

1022MP Moderated Poster Session...Outcomes in Heart Failure and Acute Coronary Syndromes

Sunday, March 30, 2003, 9:00 a.m.-11:00 a.m.
McCormick Place, Hall A

9:00 a.m.

1022MP-163 Long-Term Adherence to Evidence-Based Therapies for Coronary Artery Disease and Heart Failure in the Outpatient Setting

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Background: Previous studies have documented low use of evidence-based therapies for coronary artery disease (CAD) and heart failure (HF) at hospital discharge. Few studies have evaluated the extent of use of these therapies after discharge. We evaluated long term use of evidence-based therapies in CAD and HF.
Methods: Patients who were referred to Duke Medical Center for a cardiac procedure and had CAD or HF were identified in the Duke Databank for Cardiovascular Disease. Follow-up surveys of these patients in their communities collect patient-reported medication use annually. From 1995 to 2000 we determined annual prevalence of use of aspirin, beta-blockers (BB), and lipid lowering therapy (LLT) in patients with CAD; and use of beta-blockers and ACE inhibitors (ACEI) in patients with HF. Use of ACEI in patients with CAD but without HF was also determined. In addition to determining annual prevalence for each drug, we assessed consistency of use from 1995 to 2000 in individual patients.
Results: Reported use of evidence-based therapies for CAD and HF increased from 1995 to 2000. Of 20187 CAD patients in the year 2000, 81%, 46%, and 55%, reported use of aspirin, BB, and LLT, respectively. Only 27% reported taking all three drugs and 41% reported taking aspirin plus BB. Of the 15037 patients with CAD and no HF, 28% reported ACEI use. Of 4971 HF patients in 2000, 45% and 44% reported use of ACEI and BB, respectively; 23% took both drugs. Over the years 1995-2000 in 27088 CAD patients, consistent use was lower: 57%, 30%, and 26%, for aspirin, BB, and LLT, respectively. Nine percent consistently took all three drugs, and 22% consistently took aspirin plus BB. Of the 19432 CAD patients without HF, 12% reported consistent ACEI use. Of the 7329 HF patients, only 26% reported consistent use of ACEI and BB, and 8% reported taking both drugs.
Conclusion: Efforts to improve the use of evidence-based therapies at hospital discharge are needed, but attention also needs to focus on improving long term adherence.

9:12 a.m.

1022MP-164 Cost-Effectiveness Analysis of a Disease Management Program in Chronic Heart Failure: DIAL Trial--G.E.S.I.C.A. Investigators

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Background: The impact of chronic heart failure (CHF) disease management programs in health costs remains uncertain, and no formal cost-effectiveness analysis has been performed yet.
Methods: D.I.A.L. trial is a randomized multicentric controlled study to compare frequent telephonic fllow-up intevention versus (vs) usual care in patients (pt) with CHF. The primary objective was to determine the effect of the intervention on all-cause mortality or heart failure hospitalization. A cost-effectiveness analysis was performed: 1) Costs: total hospitalizations, ambulatory and program direct costs; 2) Effectiveness: one-year survival; 3) Time horizon: one year. The information concerning resources use and costs was obtained prospectively; 4) Sensibility analyses were performed.
Results: Between May 2000 and November 2001, 1519 pt with stable CHF were randomized (761 program, 758 control). 1) Annual mean costs per pt: program group required lower admission costs: 685 vs 827 US$, p<0.01; lower cost per intensive care unit : 728 vs 842 US$, p<0.01; lower cost for invasive procedures: 282 vs 400 US$, p<0.001. Both groups had similar costs for ambulatory care: 73.7 and 72 US$ for program and control groups, respectively (p=0.4), but the cost of drug treatment was significantly greater in the program group (578 vs 477 US$, p<0.01). 2) Effectiveness: although no significant difference was detected in one-year survival (91.1 program vs 90.1, RR=0.95, p=0.78), number of admissions for worsening of HF was significantly lower in the program group (RR=0.67, p=0.004), as well as total admissions with a non-significant benefit for the same group (RR=0.87, p=0.09). All admissions were included as resource use, not as effect. 3) We performed a cost-minimization analysis because the effectiveness was similar. Total mean costs per pt were: 2437 US$ for program vs 2618, with a difference of 181 US$ (CI 95% [19-342], p=0.02). The results were not affected by different sensibility analyses.
Conclusions: This CHF disease management program allowed a significant reduction in hospitalization costs due to fewer admissions for worsening of HF as well as of total admissions.

9:24 a.m.

1022MP-165 Comorbidity Increases Health Care Expenditures and Physician Utilization in Elderly Patients With Chronic Heart Failure

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Introduction: The incidence and prevalence of chronic heart failure (CHF) are rising in the U.S., particularly in the elderly. Despite extensive comorbidity in this group, little is known about the impact of comorbidity on the economic and physician utilization burdens of CHF in these patients.
Methods: We calculated total Medicare expenditures for each beneficiary and the number of outpatient physician visits in 1999 in a 5% nationally representative sample of fee-for-service Medicare beneficiaries with chronic heart failure. We also assessed the incremental costs and physician utilization associated with each additional comorbidity based on ICD-9 codings, after adjusting for patients' age, gender, race, primary provider type, and mortality during 1999.
Results: For the 122,630 patients in our sample, the mean age was 79.6 years, 88% were white, and 60% were female. Mean Medicare per capita total expenditures were $17,091. Although patients with 10 or more comorbidities accounted for only 11% of the total sample, they accounted for 28% of total expenditures; with a mean of $43,439 per beneficiary. The median number of outpatient physician visits per beneficiary was 17.9. 25% of patients made 23 or more outpatient physician visits and 10% made 34 or more. Beneficiaries with 5 or more comorbidities accounted for 73% of total outpatient visits during the year. After adjustment, each comorbidity associated with $3,668 in incremental expenditures and 2.2 in incremental outpatient visits.
Conclusion: Among CHF patients, extensive comorbidity accounts for disproportionately high Medicare expenditures and physician utilization. Disease management strategies targeting elderly CHF patients should focus on the population with extensive comorbidities to realize the greatest cost savings and service utilization benefits.

9:36 a.m.

1022MP-166 Heart Failure Survival Score Continues to Predict Death or UNOS 1 Transplant in Heart Failure Patients Receiving Beta-Blockers

Todd M. Koelling, Susan Joseph, Keith D. Aaronson, University of Michigan, Ann Arbor, MI

Background: The Heart Failure Survival Score (HFSS) effectively risk stratifies patients for heart transplant (HT). HT can be deferred in low risk HFSS patients; patients with HFSS in the moderate and high-risk subgroups are offered HT. However, the HFSS was developed prior to broad use of beta blockade (BB). We hypothesized that HFSS would retain its ability to risk stratify HT need in BB patients. Methods: We collected clinical data on 500 consecutive patients referred for HT from 1994 to 2002, including BB and the 7 components of the HFSS: LVEF, peak VO2, mean arterial BP, resting heart rate, QRS interval, serum sodium and CAD. Kaplan-Meier survival analysis with log rank testing and multivariable Cox regression analysis were performed with the events defined as death or UNOS 1 HT. Results: Kaplan-Meier analysis of the patient population (age 51±11, male 73%, CAD 53%, ejection fraction 21±9%, peak VO2 15.8±5.1 ml/min/kg, HFSS 8.02±1.02 [low risk>=8.10]) revealed effective discrimination by HFSS both for BB and no BB patients (both p<0.0001). Two-year event free survival was 96±2% and 87±3% for BB and no BB patients in the low-risk HFSS strata. Cox proportional hazards modeling showed that both BB (RR 0.48, p = 0.0001) and the HFSS (p < 0.0001) at the time of HT evaluation were independently associated with event-free survival. Conclusion: HFSS provides effective risk stratification with or without BB. Consideration of BB therapy with HFSS strata improves outcome prediction in patients evaluated for HT.