ABSTRACTS

RESEARCH PODIUM PRESENTATIONS – SESSION I

CV1
LIFETIME HEALTH CARE COSTS OF OBESITY-RELATED COMORBIDITIES IN THE UNITED STATES, 2007-2010

Chang S, Leung MY, Carlson NP, Colditz GA
Division of Public Health Sciences, Department of Surgery, Washington University School of Medicine, St. Louis, Missouri, USA

OBJECTIVES: This study analyzed lifetime healthcare costs of obesity-related comorbidities, including diabetes, hypertension, coronary heart disease (CHD), and stroke. METHODS: We used data from the National Health Interview Survey (NHIS), 2007-2010, and linked it to the Medical Expenditure Panel Survey (MEPS) to estimate annual healthcare expenditures. We excluded pregnant women, cancer survivors, and overweight individuals. Disease risks were estimated using the National Health and Nutrition Examination Survey data. Mortality risks were estimated using the NHIS Linked Mortality Public-Use Files and predicted for the 2007-2010 population. Analyses were stratified by gender and controlled for age, race, body mass index (BMI) category, comorbidities, smoking, and insurance status. RESULTS: Our results show that annual costs following treatment initiation were observed among partially adherent patients, and underweight individuals. Disease risks were estimated using the NHIS Linked Mortality Public-Use Files and predicted for the 2007-2010 population. Analyses were stratified by gender and controlled for age, race, body mass index (BMI) category, comorbidities, smoking, and insurance status. CONCLUSIONS: Our results show that annual costs following treatment initiation were observed among partially adherent patients, and underweight individuals.

CV2
THE ASSOCIATION BETWEEN ADRÉNERGIC MEDICATIONS AND CARDIOVASCULAR DISEASE

Simon Tuval1, Tzik N1, Chodick G1, Greenberg D1
1Ben-Gurion University of the Negev, Beer-Sheva, Israel, 2Maccabi Healthcare Services, Tel-Aviv, Israel, 3Maccabi Healthcare Services and Tel-Aviv University, Tel-Aviv, Israel

OBJECTIVES: Poor adherence to medications for cardiovascular disease (CVD) is associated with adverse health outcomes, but little is known on its impact on healthcare utilization (HCU). We examined whether adherence is related to a long-term decrease in HCU. METHODS: A retrospective cohort study of 2220 patients with CVD enrolled in Maccabi Healthcare Services in Israel initiating CVD medication therapy between 2006 and 2008. Adherence was assessed by the proportion of days covered (PDC) with medications. Patients were defined as: non-adherent (PDC<0.4), partially adherent (0.4<PDC<0.8), and adherent (PDC>0.8). HCU was estimated following treatment initiation and up to four years. Multivariable GEE models were used to analyze predictors of HCU. RESULTS: The median age of patients was 63 (67% males). Fifty one percent of patients (n=1139) were defined as adherent, 24% as partially adherent and 25% as non-adherent. Model I: The annual HCU costs of adherent patients decreased in 9% following treatment initiation (95% confidence interval [CI] 0.88-0.95; P<0.001). This decrease stem predominantly from reduction in hospitalization and medication costs. No significant changes in annual costs following treatment initiation were observed among partially adherent patients (PDC=0.99; 95% CI: 0.90-1.09, P=0.785) patients. Model II: No temporal association was found between adherence and HCU. CONCLUSIONS: Adherence to CVD medications is suboptimal. Adherence is associated with long-term decrease in healthcare expenditure. Exploring reasons for the high non-adherence and ways to improve adherence may optimize utilization of health systems’ scarce resources.

CV3
PREVALENCE AND DIRECT MEDICAL COSTS ASSOCIATED WITH ANGINA AND CHEST PAIN FOLLOWING PERCUTANEOUS CORONARY INTERVENTION IN THE UNITED STATES

Michael S1, Bonafele 2, Wade 3, Stephens 1, Hernandez J1
1Abbott Vascular, Santa Clara, CA, USA, 2Truven Health Analytics, Cambridge, MA, USA, 3Athead Outcomes Research and Consulting, Salt Lake City, UT, USA

OBJECTIVES: Percutaneous coronary intervention (PCI) is effective in reducing angina and improving quality of life. However, as reported in clinical trials, angina and chest pain frequently recur after PCI, imposing a burden on the health care system. The objective of this study was to estimate using the Truven Health MarketScan Commercial and Medicare Supplemental Databases from 2008-2011. Patients were required to have 12 months of continuous enrollment pre- and post-index. Post-index angina and chest pain were defined as an impact claim with a principal diagnosis of angina or chest pain. Patients undergoing PCI (index event) were identified in the Truven Health MarketScan Commercial and Medicare Supplemental Databases from 2008-2011. Patients with post-index acute coronary syndrome (ACS) were excluded from the cost analysis. RESULTS: 51,756 patients met the selection criteria (mean age: 61.8 years, 72% male). The incidence of post-PCI angina or chest pain was 27.8% by one year increasing to 40.1% by three years post-PCI. Average total costs for angina/cheast pain patients were 1.8 times higher (+$14,514) than those without angina, chest pain or ACS (p<0.001) with differences persisting at three years (p<0.001). Post-PCI cardiovascular-related costs were likewise higher for angina/cheast pain patients one year ($18.548; SD=$30.525) versus $7,896 (SD=$17,638), p<0.001 and three years post-index ($)33,238 (SD=$43,261) versus $19,773 (SD=$34,097), p<0.001. CONCLUSIONS: Post-PCI angina and chest pain are an important but understudied component of the healthcare burden. Strategies to reduce these events could impact the costs and improve outcomes of ischemic heart disease.

CV4
OUTCOMES AND HEALTH RESOURCE UTILIZATION AMONG PATIENTS WITH HEART FAILURE WITH REDUCED EJECTION FRACTION (HFrEF) AT AN ACAD EMICAL CENTRAL (AMC) IN THE UNITED STATES

Bress A1, King J1, Singhal M1, Brixner D1, Kielhorn A2, Patel H1, May J2, Risquipak J1, Munger M1
1University of Utah, Salt Lake City, UT, USA, 2Aamen, Thousand Oaks, CA, USA

OBJECTIVES: To assess clinical characteristics, hospitalizations, and hospita lization charges among a contemporary, real world cohort of HFrEF patients. METHODS: A retrospective cohort study of HFrEF, identified by ICD-9 code 428.x with a left ventricular ejection fraction (LVEF) ≤ 40% between 01/01/08 to 12/31/13 (study period) were identified using an AMC enterprise data warehouse (EDW) that includes electronic health records and billing/administrative claims. Results: Five hundred and eleven patients with CHF were included (median age 64.5 years; 70% male). The average LVEF was 29%. Medication data and etiology was assessed in prevalent HFrEF (n=989). The prevalent HFrEF cohort was predominantly ischemic etiology (67%) and ACEI/ARB/aldosterone antagonists were prescribed in 53%/16%/29%, respectively. Eighty percent were on ß-adrenergic blockers. Atrial fibrillation and renal insufficiency were present in 45% and 42%, respectively. Devices were present in 34% (Implantable Cardioverter-Defibrillator) and 16% (Cardiac Resynchronization Therapy) of patients. In the full sample, during a mean follow up period of 34 ± 26 months, all-cause mortality was 18% (13% CV death) at one-year and 23% (16% CV death) at two-years. There were 2106 all-cause hospitalizations of which 972 (46%) were for heart failure (HF). The mean length of stay for HF hospitalizations was 4.3 days and the median charge was $27,230. Among the HF hospitalizations the 30-day readmission rates were 167 (21%) for all-cause, and 111 (13%) for HF. CONCLUSIONS: In an AMC-based EDW, HFrEF was well treated, resulting in a 1-year mortality and 30-day re-admission rates similar to published data. The median charge for a HF hospital stay was $27,230.